

AMERICAN ARTISAN and Hardware Record

Vol. 82. No. 2.

620 SOUTH MICHIGAN AVENUE, CHICAGO, JULY 9, 1921.

\$2.00 Per Year.

THE New Floral City Furnace is now ready for distribution and we invite your inquiries.

Note the large fire chambers and immense direct fire surface.

A heavy all cast furnace of the highest quality.

Has slotted fire pot, large double fire door and will burn any kind of fuel.

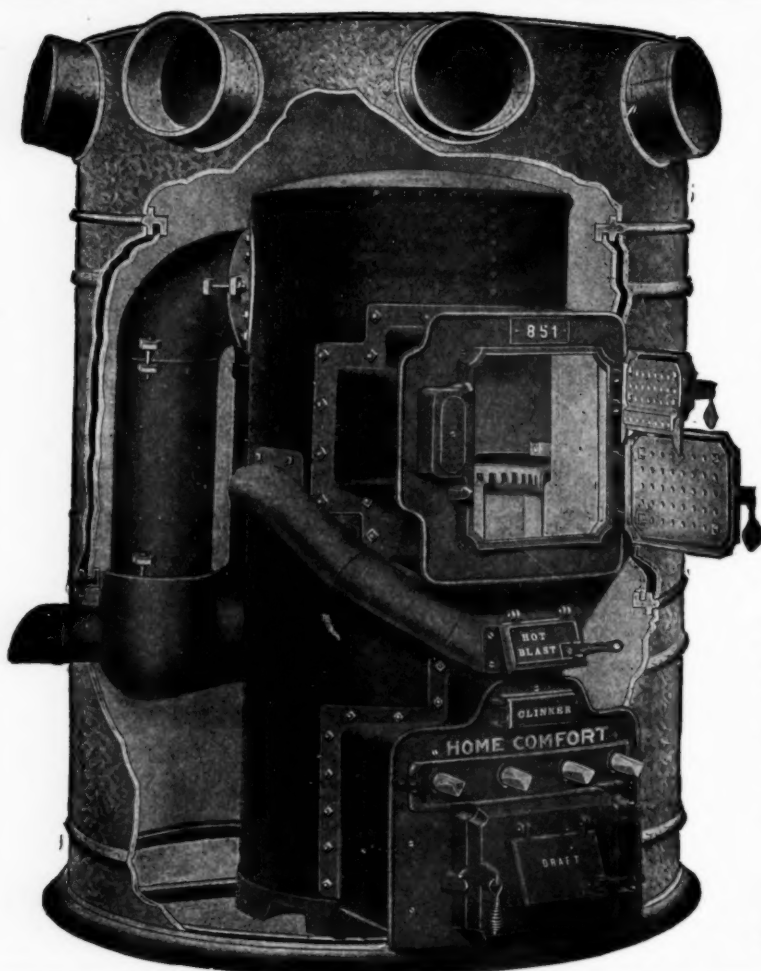
A powerful, durable and economical heater.



THE New Queen Pipeless Furnace—the best Pipeless Furnace on the market.

It has large one piece cast radiator with direct draft outlet operated by a damper at the front, air blast fire door and extra large casings, giving ample air spaces.

MONROE FOUNDRY & FURNACE
COMPANY
MONROE, MICHIGAN



"HOME COMFORT"

THERE ARE NO BETTER WARM AIR HEATERS

THE dealer who sells "Home Comfort" warm air heaters sells heaters that are not only exceptionally reliable but distinctively well made.

An examination of the ALL STEEL construction of "Home Comfort" warm air heaters will reveal to you an unusually well designed heating apparatus.

*For many years they have been
real money makers*

The members of this new company are men who have been connected with the original makers for more than twenty years.

We have a splendid exclusive agency sales plan to offer you.

Let us tell you all about it.

Write today for our catalog

ST. LOUIS HEATING CO.

2400-06 COLEMAN ST.

ST. LOUIS, MO.

How Do You "Stack Up" With Your Competitors?

Your competitor makes as many "turn-overs" as possible but you can go him one better if you buy

NESBIT and

ALL CAST

WEIR

ALL STEEL

FURNACES



Handy Pipe and Fittings
Rock Island and H & C Registers
and
Everything That's Good in Furnace Supplies

*We Carry the Stock and Ship
When You Want It*



STANDARD FURNACE & SUPPLY CO.

407-413 So. 10th Street

Omaha, Nebraska

FOUNDED 1880
BY
DANIEL STERN
Thoroughly Covers
The Hardware, Stove,
Sheet Metal, and Warm
Air Heating and Venti-
lating Interests

AMERICAN ARTISAN and Hardware Record

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THE DOG IS COMING OUT OF THE WOODS

How far can a dog run into the woods?

A silly question, you say; of course, he can run as far as he wants to.

Not at all.

After he gets half way in, he is running out again.

When you get ten minutes beyond midnight, you are not deeper into the night, you are starting into a new day.

The statement is not original with us. It was made a few days ago by one of the foremost authorities on economics, with reference to the present conditions.

Continuing he said:

"We have run into the woods more than half way and are now running out of it, instead of into it."

Leaders of finance, commerce and industry are all agreed that we have passed the low point of depression and that we are on the way toward better trade.

This very period is one, however, that will try men's capacity for continued growth.

Those who hang back now will have a harder road to travel in a year than they have at this time, for success—real progress—is built in days of adversity rather than in periods of smooth sailing.

What is termed "good will"—often built up at great cost—has in many a case disappeared.

The market of the future will be to the man—the retailer, the wholesaler, the manufacturer—who has the vision and the courage to go in and take a great mass of people who are now unsettled in their anchorage and point them, either back into their old anchorage, or into a new one.

"A greater number of people are open to be influenced by scientifically directed effort

than ever before in the United States in any period of its history.

"Advertising is to play a greater constructive part in the next ten years than it has played in the past twenty years."

Note that the dog must keep agoing.

If he lies down when he reaches the middle of the woods he will not get out.

You must make a real effort.

This is no time to wait for things to right themselves.

Things do not right themselves.

Nobody can do for you what you must do.

Add new lines to your stock.

There are more people who will buy what you have for sale than you think.

Go after them.

If you are a retailer—get on the job:

Buy—conservatively, but enough to fill the wants and needs of your people.

You must be constructive in your campaign for business.

If you are a manufacturer or wholesaler of hardware—get on the job.

There are thousands of well-rated hardware dealers, subscribers to American Artisan and Hardware Record, who are dissatisfied with their former connections or who are not handling anything in your line.

They are excellent prospects for you.

Make a definite effort to secure their orders for whatever you make or wholesale that should be sold by hardware retailers.

Then you will hasten the time when you will be able to see the edge of the woods and can see the edge of the woods and get back into the open field of business prosperity.

Go after business—by aggressive advertising and personal sales work in the homes of your people.

Random Notes and Sketches

By Sidney Arnold

A few days ago I visited the Washburne Continuation School, at Fourteenth and Union Streets, Chicago, and saw the good work which is being done there for the boys and young men who attend there for the purpose of perfecting themselves in a technical way in the sheet metal and other mechanical trades.

Under the guidance of Mr. Adolph Kealer, the sheet metal instructor, I had the good fortune to observe also what the Federal Government is doing for disabled veterans of the World War in the matter of teaching them various trades, so that they may be enabled to earn their living.

There were men learning sheet metal drafting, plumbing, steamfitting, shoe repairing, watch repairing, tailoring, machinist work, carpentry, electrical work, baking, etc., all of them being paid a living wage while in school, the course usually being for four years.

It would do any sheet metal contractor good to visit the Washburne School and see for himself the excellent work which is being done for sheet metal apprentices under Mr. Kealer's guidance, and after he gets through this department, the contractor can spend a very profitable hour also, familiarizing himself with the vocational instruction which is being given, free of charge, to disabled veterans of the late war.

Incidentally, I am wondering how many contractors have made it a rule to give preference to ex-service men of their trade in the matter of employment.

Here is another suggestion:

If you know of a disabled veteran who is having trouble in getting his compensation for injury or disability, you can settle part of the debt you owe him and other veterans by notifying the nearest American Legion Post, the officers of which will be glad to push his case.

* * *

I received in last Tuesday's mail a folder from Jule Gerock which showed a very "life like" reproduction of one of those things that people tell me were in the habit of appearing at night in the vision of persons who partook too freely of those liquids which the Eighteenth Amendment to the Federal Constitution says we must not make, sell or buy any more.

Jule, however, did not send the folder to me as a reminder of days gone by, for he knows that I never had the habit of looking at the wine when it is red. It is just a reproduction of one of the four dragons which he recently made for the Chinese pavillion in the Zoological Park at Saint Louis, Missouri.

Like many other ornamental figures made in his factory, this dragon was manufactured of heavy sheet zinc and thus furnishes another example of the many uses to which this very fine metal may be put.

* * *

We were talking about cases of absent-minded people and my friend George W. Jungck of Menominee, Wisconsin, told about a woman who said:

"My dear, we've simply got to change our family doctor. He's so absent-minded. Why, this afternoon he was examining me with the stethoscope and while

he was listening he suddenly called out. 'Hello! Who is this speaking?'"

* * *

Advice is no good unless you take it, declares my friend George A. Leiser, sales manager Malleable Iron Range Company, Beaver Dam, Wisconsin.

He tells about an old darkey who visited a doctor and received instructions as to what he should do. Shaking his head, he was about to leave the office, when the doctor called out:

"Hey there, uncle, you forgot to pay me."

"Pay you fo' what, boss?"

"For my advice."

"Nossuh, boss," said Rastus, shuffling out, "I've complutated it from all angles, and decided not to take it."

* * *

There is a probability that the burdens of the hardware dealer will soon be increased, says my friend George M. Gray of Coshocton, Ohio, Secretary Ohio Mutual Hardware Insurance Company. Here is the reason which he gives:

"Look here!" bellowed an irate customer in the hardware store of Four Corners. "You say you won't sell me a shovel unless I get a permit from the authorities and sign my name in that book. What's the big idea?"

"We ain't takin' chances," answered Proprietor Stimson firmly. "Gov'ment's mighty keerful these days. You fellers buy a shovel, dig up the ground, plant barley, make it into malt, and there you are. No sir-ree!"

* * *

H. J. Bradbury, First Vice President of the Ohlen-Bishop Company, invited me to lunch with him and Frank Gould, Sales Manager of the Company, when I visited at their Columbus plant a few weeks ago. We drove downtown in Bradbury's machine, Frank and I occupying the rear seat.

As we crossed the viaduct in front of the union station, Bradbury remarked that he would have to buy a set of "snubbers" for his car to take the rebound off the springs.

"I don't see any necessity for that," said Frank. "This car seems to ride very comfortably."

"Yes, it probably does right now," replied Bradbury. "But I don't always carry such a load in the tonneau as I have now."

I am wondering if he meant to reflect on the length of Frank's belt.

* * *

The Dreamers.

They dream by day, they dream by night,
And strange their dreams appear,
To them the whole broad world is bright
And all is beauty here.
They read on fancy's glowing wall
Their dearest wishes writ,
But do they labor? Not at all—
They simply sit and sit.

And dream by night and dream by day
Of things they can attain;
And, oh! the wondrous things they say,
And say and say again!
They see success at every gate
And cures for human ills—
But do they labor while they wait?
Not much! We pay their bills.

—Laurana W. Sheldon.

Up-to-the-Minute News Siftings

*Items of Interest to Dealers Gleaned from Many Fields.
National and Local Business Plans, Problems, and Practices.*

THE SELL NOW LEAGUE IS BOOSTING BUSINESS.

The Sell Now League has received the enthusiastic support of sales executives, manufacturers and merchants throughout the country, according to its chairman, J. Mitchel Thorsen.

Business men, organizations, and nationally known leaders of industry have joined this movement and support the idea of selling intensively now to stabilize the present economic situation and to keep the wheels of industry in motion. The daily press has rallied enthusiastically to the support of this movement, and has explained it in detailed comments.

The committee of the Sell Now League includes Francis H. Sisson, vice president, Guaranty Trust Company; Senator Nathan Straus, Jr.; Joseph P. Day, real estate operator; J. H. Tregoe, secretary-treasurer, National Association of Credit Men; Jules Bache, banker; Senator Arthur Capper; O. W. Bartlett, president of the Executives' Club of Chicago; Alfred Fuller, of the Fuller Brush Company; John Willys, president of the Willys-Overland Company; E. C. Patterson, president of the Warner-Patterson Company, Chicago, and B. C. Forbes.

The Sell Now League was originated as the result of the publication in the leading newspapers of New York, Chicago, Philadelphia, Cleveland, Detroit, and other cities, of an advertisement entitled "Sell Now—Right Away—Don't Wait."

This announcement emphasizes the need of intensive selling at the present moment without any let up. It elicited immediate response in the form of request for reprints to be distributed among sales organizations.

The support of prominent leaders in the financial and industrial world includes such men as Coleman Du Pont, who has written:

"It may be necessary to meet any number of exigencies in business by curtailing certain types of effort, but it is always necessary to sell to somebody somewhere, and I think you have made an excellent point to this effect."

The cooperation of further manufacturers, selling executives and merchants is asked to help in the educational program of stimulation to sell now.

Manufacturers and sales executives are realizing the need of intensive efforts to sell to selective markets.

No funds are solicited or asked by this committee. The statement of fact that a man will sell now intensively or a statement of fact as to what he is doing to carry out this program, will give him a hearty welcome by the supporters of the league.

The offices of the league are at No. 119 West 40th Street, New York City. All material received will be used to help in this educational program and carried through the press of the country.

Senator Arthur Capper said: "I endorse heartily

the Sell Now movement. The general economic condition shows decided improvement and I think the time is opportune for the merchants of this country to render helpful service looking to a return of normal conditions through a vigorous selling campaign."

O. W. Bartlett, president of the Chicago Executives' Club, who sees enthusiastic support of the Sell Now movement growing in the West, said in a letter: "Intensive sales campaigns that are morale building, both within and without sales organizations, will incite the merchants and the merchants' customers to buy now. More optimism, less pessimistic propaganda and greater shoe leather mileage are needed by sellers today."

Accurate Observation of Performance Is Necessary to Figure Base Pay.

One of the principal factors in lowered production costs is the knowledge of time consumed for each of the various operations necessary to complete the manufacture of any article.

While it is true that piece work pay has a tendency to speed up production, it is also a fact that in many cases that the basis for the piece pay is not arrived at by accurate tests and that therefore the rate is not correct.

For example, the time and work slips of various employees performing the same kind of work will be examined, and two work slips selected as fair standards for a certain operation, but there may be nothing else to indicate whether one of the operators is



Time Study Watch.

a "plugger" who works steadily but who is slow, or whether the other wastes considerable time loafing in wash rooms or otherwise, so that really the two work slips do not show what is a true day's work, and therefore are of little value so far as determining a real basis for the piece work price is concerned.

This is unquestionably one of the reasons for the objection of labor leaders to this system of paying factory employees, and it is, therefore, most important to manufacturers that they take every step possible to make sure that their base rates of pay are arrived at by scientifically correct methods and observations.

In order to be absolutely correct, and also to avoid "stalling" on the part of operators while under observation, it is necessary to employ devices which will show positively the actual time consumed in performing any operation as well as the time "wasted" by the operator, without his knowledge.

This object can now be accomplished by using a "Time Study Watch," such as the one shown in the accompanying illustration. It works somewhat on the order of the "stop watch" which is known among horse racing fans, but is much more complete and furnishes much more information than the latter.

For example, the observer may carry the watch in his pocket and while apparently not interested in the work of the man who is being observed, set the watch, count ten or twenty operations, stop it; then return to his office. The watch will show the actual time used to perform the ten or twenty operations, and also the time wasted by the operator, or the time "taken out" for adjusting or for any other purpose.

The "Time Study Watch" also permits the taking of two entirely different operations at the same time.

Another very desirable feature of this very useful appliance is the "production dial," which does away with mental or mechanical computation of figures after observations have been taken and gives a mechanical testimony which can not be questioned, showing the amount of production per hour.

The "Time Study Watch" which is equipped with a split second device is controlled by Stein & Ellbogen Company, 31 North State Street, Chicago, Illinois, and full information about the various types of these watches and how to secure the best results from their use may be obtained by writing to Mr. J. S. Stein of the company.

Briefly Recounts Benefits of the Revolver.

One of the leading sporting goods dealers of the Middle West briefly recounts the benefits of the revolver in answer to John R. Thompson, restaurateur of Chicago, whose offer to pay \$1,000 to anyone giving one good reason in favor of revolvers was published on page 22 of the June 11, 1921, issue of AMERICAN ARTISAN AND HARDWARE RECORD. He gives the following reasons:

"It places an invalid or delicate person on a par with a giant or wild beast.

"Cities and towns that have no revolver laws have no crimes or very few crimes.

"Nobody ever thought of taking the crook out of circulation; he is the one who abuses firearms.

"Billions of dollars are spent in the United States for 'police power'; why not exile the crooks and save some of this money?

"The tax payer pays the tax and the hold-up man holds him up.

"Crime is not a wave it is a business that is tolerated.

"If crooks were put out reclaiming arid and swamp lands and kept there until cured, it might help some.

"Some lawmakers are always glad to kick a hole in another fellow's business but never in their own.

"The firearms business is and has been a legitimate business for several hundred years.

"People would be safer, if a crook was sure that the inoffensive citizens were allowed to carry guns.

"A government ought to give its citizens the same advantages it has against another government.

"A citizen ought to be allowed at least on a par with a crook.

"Did you ever hear of a policeman being held up? They carry guns and the crook knows it.

"Many laws are made to burn down a house to get rid of the rats in it.



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SUSPICION IS GROWING

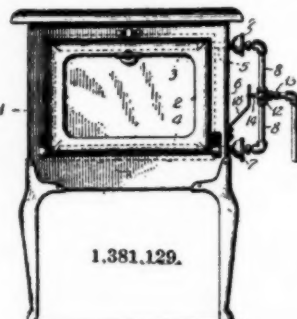
That Our Financial Reporters Have Not Been Interviewing the Right Parties.
—Darling, in the New York Tribune.

"London is larger than New York and London police do not carry revolvers.

"Show us a town that has stringent gun laws and we will show you lots of crime in it."

Patents Safety Valve for Gas Stoves.

Under number 1,381,129, United States patent rights have been granted to Henry C. Maul, Detroit, Michigan, assignor to The Michigan Stove Company, Detroit, Michigan, a Corporation of Michigan for a valve for gas stoves described in the following:



Means for preventing accidental actuation of a valve having more than one adjustment relative to a stove, comprising a resilient member, adapted to have one end thereof fixed to the stove adjacent said valve and its opposite end free to be frictionally engaged, and

a valve member in alignment with and opposed to the usual handle of the valve and movable therewith, said resilient member having its free end disposed at a tangent to the arc in which the valve member moves so that said valve member may engage said resilient member from two directions and retain said valve handle in adjusted position.

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A wise man signs no man's note.

Time Is Ripe for Closing Out Sales of Refrigerators and Ice Cream Freezers.

Definite Quotations of Prices and Real Selling Arguments Are Absolutely Essential to Successful Campaign.

In most cases it is safe to say that if you have any ice cream freezers or refrigerators left in stock on August 15th, they will stay there until next Summer.

It is therefore high time to make a specific and sustained effort—if you have any in stock now—in order that they will be disposed of and the money you invested in them be deposited in your bank and again

invested, in merchandise for the fall and winter season.

On this page and the following, we show several advertisements which will give you an idea of the way other hardware merchants go after the business in refrigerators and ice cream freezers. From these you may draw your own conclusions as to just how the proposition can best be handled in your locality.

The chief point, however, for you to keep in mind is that *refrigerators and ice cream freezers do not sell themselves.*

It is necessary to bring them to the special attention of the people in your community.

Freezers Yes!



A fine quality
smooth ice cream
without turning a
crank.

May We Show You?

Herlocker Hdw. Co.

109 N. Main

Phone 182

WINCHESTER

Figure 1.—Ice Cream Freezer Advertisement Which Needs Only Price Quotations to Make It Perfect.

It is necessary that this special effort be made now.

It is further necessary that some specific reason or inducement be furnished their prospective customer for making such a purchase near the "tail end" of the season.

And right here, let us remind you that while ice cream at one time was considered only as a dish for summer, this condition does not obtain now, for ice cream and ices are commonly served as dessert even during the coldest winter months.

So you have a very good argument to present to your people when you endeavor to sell them a freezer at this time.

Two months at least of good hot weather during which they will be able to enjoy this cool icy and delectable dish at very little cost, as compared with the price the confectionery store charges.

A freezer will pay for itself in a very short time.

Now then—let us consider the three advertisements shown on this page and the next, for the purpose of deciding which type and underlying idea is likely to serve your purpose best—not only for the purpose of disposing of the balance of your stock, but fully as much for the purpose of inducing more people to make their own ice cream and therefore to buy ice cream freezers at this or any other time.

Figure 1 shows a single column advertisement, a

scant six inches long. There are ten lines of type, twenty-five words in all, and nine of these give the name and location of the store, thus leaving sixteen words for the selling argument proper.

It is true, however, that the illustration, which is a very effective one, tells more about the freezer than many words would do.

But you will admit that there is something lacking in the advertisement—the matter of price is studiously avoided.

Why?

Isn't there the danger that many people who would otherwise be interested in having

you show them how, will hold back because of the very natural thought that this particular kind of a freezer costs considerably more than the regular type of freezer?

If the price had been mentioned, or if some such reference had been made that it costs no more or only very little more than the crank type, this advertisement would have been far more effective.

Now take the advertisement shown in Figure 4.



ALASKA Cork Lined Refrigerators

A LIFE PRESERVER

Scientific Refrigeration at Record
Breaking Price Saving

When you and your guests are assembled around your table and are waiting for Dessert, it helps to know that the cream has not turned, flopped or wilted overnight.

That assurance can be yours, and better still, you can know that all Meats, Fruit, Milk and Butter and all other drinks and Table Delicacies are equally as good, and are as sweet and wholesome as when freshly delivered.

In Summer and Winter you keep them away from Dirt, Dust, Germs, Insects and Heat in an Alaska Correctly Chilled Refrigerator. Quality High, and Prices Low when compared to other ice boxes.

John S. Rush

Hardware and Impenments
Anderson Building Across From P. O.

Figure 2.—Refrigerator Advertisement Which Would Be More Effective by Quotation of Prices.

L. D. MILLIKEN



This is refrigerator season and when you buy a refrigerator you want one that will save its cost in a few years in ice. There is a great difference in refrigerators. It is all in the circulation system and the insulation. We have the kind that saves the ice and at the same time keeps the contents of the box at the proper temperature. Come in and see them.

L. D. Milliken, Hardware

Figure 3.—Another Refrigerator Advertisement Which Quotation of Price Would Improve.

tion of the advertisement which refers to ice cream freezers is really nothing more than a mere price list.

Not a word about the many good points about Blizzard or Lightning Freezers. How easy they are to operate, how quickly they will freeze the cream; how long they will last, etc.

Nor is there any attempt to give any reason why a person should go to the trouble of making his own ice cream instead of just buying a brick or two at the confectionery store. This advertisement would have been just right if these two points had been touched upon, and this could have been done in less than fifty words for which there would have been plenty of space. The advertisement occupied a space of three columns by 8½ inches.

Figure 5 is a reproduction of a two column advertisement, three inches deep.

Here we have a good selling argument, in very few words, on the matter of making your own ice cream.

Next comes a short and efficiently worded statement about the particular type of freezer, and a paragraph calling attention to other items for the hot weather season, such as water coolers and refrigerators.

But there is the same deficiency as in Figure 1.

No mention is made of the price.

Keep this point in mind:

The omission of price quotation usually creates the opinion—very often erroneous, and therefore detrimental—that the article is high priced.

Don't be afraid of letting the prospective purchaser know what he will have to pay for the article you want to sell him.

With very little change and by the addition of only a few paragraphs, Figure 4 would have been 100 per

cent efficient, and the quotation of a definite price would have made Figure 1 and 5 ideal advertisements.

Here we have an illustration of the well-known Shepard's Lightning Freezer, made by the North Brothers Manufacturing Company, Philadelphia.

But the por-

cent efficient, and the quotation of a definite price would have made Figure 1 and 5 ideal advertisements.

Keep these points in mind when you start in to line up your advertising campaigns to close out the balance of your stock of ice cream freezers.

Figures 2 and 3 represent typical advertisements of refrigerators. The first is a reproduction of a two column announcement, 5½ inches deep, the other was 9¾ inches deep and two columns wide.

Both were nicely laid out. Typographically there is very little to criticize about them.

But they are both lacking in the matter that they fail to give any idea of what the prospective purchaser

Miller Hardware Co.



Handsome Fast Colored Flags

3x5 BUNTING FLAGS	\$1.50
4x6 BUNTING FLAGS	\$2.25
5x8 BUNTING FLAGS	\$3.50
6x10 BUNTING FLAGS	\$5.00

4x6 Wool Flags\$ 6.00	8x12 Wool Flags ..\$13.00	18-inch Flag on Stick15c
5x8 Wool Flags\$ 8.00	10x15 Wool Flags ..\$18.00	24-inch Flag on Stick25c
6x10 Wool Flags\$10.00		36-inch Flag on Stick50c
1 in. x8feet Flag Pole and Rope75c		1 in. Galvanized Pole Holder50c
1½ in. x11 feet Flag Pole and Rope ...\$1.35		1½ in. Galvanized Pole Holder75c

ICE CREAM FREEZERS

1 qt. Blizzard Freezer\$3.75	3 qt. Blizzard Freezer\$5.00
2 qt. Blizzard Freezer\$4.50	4 qt. Blizzard Freezer\$6.50

SHEPHERD'S LIGHTNING FREEZERS

3 quart \$6.00 — 4 quart \$7.50 — 6 quart \$9.00 — 8 quart \$12.00
10 quart \$16.00 — 14 quart (with wheel) \$29.00



ICE CREAM DISHERS — SODA SPOONS — ICE PICKS — ICE SHAVERS
DRINK MIXERS — — — CREAM LADLES

Miller Hardware Co.

135-137-139 UNION ST., CLEON, New York

Figure 4.—Prices Are the Whole Argument Here. A Little Description and Telling Argument Would Have Made This an Ideal Advertisement.

will have to pay for the refrigerators that they are telling about.

Even at the beginning of the season, this would be a serious omission of an essential, but especially from now on, until

Make Your Own Ice Cream

Just the way you like it. Then you know it is pure and made of the correct ingredients. Get one of our

Auto Vacuum Freezers

There's no work to it. All you do is fill it with the cream at the top, and ice at the bottom and nature does the work. We can also supply any size WATER COOLER or REFRIGERATOR to take care of your health during this hot weather.

Oursler Hardware Co.
S. E. CORNER 6TH AND CHEROKEE.

Figure 5.—Fine Advertisement of Freezer. How Much? Question Not Answered.

there is little or no hope of selling a refrigerator, price should be emphasized in every advertisement.

Simply using a phrase like, "Scientific refrigeration at record breaking price saving," won't have the desired effect.

You must tell in unmistakable language what advantage there is in the latter part of July or in August, or near the close of the warm weather season, so far as purchasing a refrigerator is concerned, and one of the most important points right now, for you, is to get the cost out of the one or two, or dozen, refrigerators you have in stock, so that you may re-invest the money realized from their sale.

Price will do it, and it is therefore highly important that you quote such prices in your advertisements that will help to induce people to spend their money now rather than waiting until next Spring.

George W. Leedle Sells Out to Corry B. Atherton at Marshall, Michigan.

George W. Leedle, the well known hardware dealer at Marshall, Michigan, has sold his store to Corry B. Atherton of Detroit, who will take charge at once.

Mr. Leedle and his brother Archie bought the hardware business of Cook Brothers in 1898 and five years later Mr. Leedle bought his brother's interest in the store. He is a past president and a member of the executive board of the Michigan Retail Hardware Association. He has also been a delegate to the annual convention of the National Retail Hardware Association for the past six years. He was elected mayor of the city, serving in that capacity in 1908 and is a member of the board of directors of the First National bank.

Mr. Leedle had considered selling his business for some months. As Grand Lecturer of the Grand Chapter of Royal Arch Masons of Michigan he was obliged to spend a large part of his time away from home and his decision to sell was the result of being too fully occupied with the Grand Chapter work.

H. W. Karr Is New Publicity Manager of National Cash Register Company.

H. W. Karr, formerly of the *Daily News*, Dayton, Ohio, has been appointed Manager of the Publicity Department of the National Cash Register Company. He succeeds C. W. Hamilton in this position.

The Company has announced many new improvements for the class 900, class 700, class 1200 and class 1700 machines. These improvements were only added after passing severe tests.

R. F. McKone Will Cover Central Jobbing Trade for Landers, Frary & Clark.

R. F. McKone, who has been sales service manager of the St. Paul branch of the United States Rubber Company for the past two years, has accepted a position with the Landers, Frary & Clark Company, New Britain, Connecticut, as traveling salesman, calling on the jobbing trade of Michigan, Indiana, Illinois and Northern Kentucky in the interests of the famous "Universal" line of cutlery and other household utilities.

Mr. McKone, prior to his connection with the United States Rubber Company was with the Kelley-How-Thomson Company of Duluth for six years in the sales department. His successor has not been decided upon as yet.

In the two years he has spent with the United States Rubber Company he has made many friends, all of whom will wish him success in his new position.

Manitowoc, Wisconsin, Hardware Pioneer Passes on to His Reward.

William Rathsack, Sr., for 67 years a resident of Manitowoc, Wisconsin, and for many years a prominent hardware dealer and sheet metal contractor of that city, died recently after an illness that confined him to his bed for ten days.

Mr. Rathsack was born in 1848 and at the age of 16 years became an apprentice in the sheet metal shop of August Berne, where he worked himself up to the position of foreman. Later he became superintendent of the Rand & Roemer Company, but in 1893 he established himself in the hardware and sheet metal business. When his wife died about fifteen years ago he decided to retire from active work and the business is now conducted under the name of William Rathsack Sons Company in the fine store building which stands as a monument to his energy and industry. He is survived by six children, William, Jr.; Mrs. Anna Behm; Louis, Mrs. Adolph Kadow; Mrs. N. T. Ziglinski; and Charles Rathsack, all residents of Manitowoc.

B. M. Dennis, Decatur, Illinois, Hardware Dealer, Passes Away.

One of the best known hardware dealers of Illinois, B. M. Dennis, suffered a stroke of paralysis about two weeks ago and died as a result thereof in the Decatur Hospital on June 30th, at the age of 63 years.

Mr. Dennis was born in Peoria, Illinois, and located in Decatur in 1881 opening a hardware store which he managed until his fatal illness. His son, Walter Dennis, will continue the business.

American Steel & Wire Company Will Handle J. C. Pearson Products Direct.

The American Steel & Wire Company has taken over the business and goodwill of the J. C. Pearson Company, Incorporated, Boston. This company had been owned and operated by the American Steel & Wire Company, since 1913. The American Steel & Wire Company hereafter will handle Pearson coated nails and the general business of the J. C. Pearson Company, Incorporated, direct, and the men in charge of this branch in the past will remain.

Wants to Know Who Sells the Janns Vacuum Bottles.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Please advise who sells the Janns vacuum bottles.

Yours truly,

H. F. DALLMAN.

—, Wisconsin.

A Shear Cuts Like a Poor Saw When It Is Not Made As It Ought to Be Made.

This Article Explains in Detail the Chief Points of Difference Between the Woolworth Kind and the Really Satisfactory Shear.

Written for AMERICAN ARTISAN AND HARDWARE RECORD by George H. Beaudin, Western Manager of J. Wiss & Sons Company, Newark, New Jersey.

Roughly speaking, shears may be divided into four classes.

1. The "Woolworth" grade, which is made of cast iron and usually retails at from 10 to 50 cents, according to the "nerve" of the variety or dry goods dealer. They do not cut but chew. A great many women are using these shears and simply saw their way through the goods, often spoiling material that is very costly. These cast iron shears, if dropped on the floor, will break into many pieces.

2. So-called cast steel shears are the same as the cast iron, but a little better finished and the cutting qualities are no better. These are retailing in department stores and drug stores for about 50 cents. They are fitted with a rivet and nickel plated and often put up into a beautiful bag, but the cutting quality is missing.

3. There are a great many so-called solid steel shears that are made of converted steel. When they drop on the floor, they will not break because the outer edge has been hardened with acid, but with the first grinding, you reach the soft interior of the shear, and it becomes useless.

4. The steel laid shear is made by welding a piece of crucible steel to the blade, thus forming a combination of a soft, pliable body that can be shaped to fit the



George H. Beaudin.

hand with an extremely hard crucible steel for the cutting edge.

It is true, however, that in some steel laid shears, in order to cheapen the cost of production, or because of faulty methods of tempering, the blade remains comparatively soft. This results in shortening the life of the cutting quality of the shears, and in a few weeks' time, they will not cut any better than a cast iron shear. They chew the material, and the only way that you can use them is by putting the goods into the "heel" of the shear and saw through by main force.

A properly made and accurately set shear will cut the material practically without effort and if you hold the material in the air with one hand and cut with the shear in your other hand, the goods will fall to the ground if you release it. The shear does not pinch or squeeze the material. This fine cutting edge is due to the high carbon crucible steel in the face of the blade.

To the average man or woman one shear is very much like another. As a matter of fact there is such a vast difference between a really high grade shear and those of inferior make that I believe it is worth while to briefly describe the more important operations in their making, so that the public can more easily understand the reasons for the superior quality of a good shear and why this quality means for them better shears.

The frame of steel forged



Welding the Hard Steel Cutting Edge to the Tough Frame.



Steel Forging Department Where Frames Are Forged by Means of Powerful Drop Hammers.

shears is formed from a very tough special forging steel under a powerful drop hammer. This steel is used because it renders the frame practically unbreakable and its toughness and pliability in the initial



Showing "Steelforged" Shear Blade In Various Stages of Development.

stages of manufacture permit the permanent adjustment so necessary to smooth cutting blades. It also enables the moulding of the handles to exactly the correct shape. You can hammer, bend and twist the handles of such shears and still not break them. Thus we have a shear that will stand up under the strain of years, with handles that properly fit the hand, and blades so accurately adjusted that they cut the

goods without gnawing and with the least possible effort. After the frame has been forged, a piece of the finest crucible steel is welded to the inside of the blade. This forms the cutting edge. The two pieces, after welding, become one, forever inseparable. Crucible steel is used because it takes a very high degree of temper, and can

blades would be loose and the shear would not cut smoothly, a condition often found in shears of inferior quality.

The blade is now ready for hardening. It is heated to a certain fixed degree and while hot, plunged into a tank of running water. After hardening, the tempering takes place. The blade is placed in a solution. When there is even a slight difference in the temper of shear blades the harder blade will wear into the softer one, thereby greatly shortening the life of the shears, and no amount of grinding can change this condition.

The rigors of hardening and tempering have left their imprint upon the blade, so that it is now warped and crooked. It must be "peened," or straightened, into proper shape. A skillful mechanic places the blade on an anvil and taps it carefully with a light hammer until the desired shape is secured. The blade is still crude but soon loses its rough appearance when put to the various grinding stones which measure from fifteen inches to six feet in diameter.

Up to this stage the blades have been treated sep-



Putting on the Finishing Touches. Adjusting the Blades for Perfect Cutting.

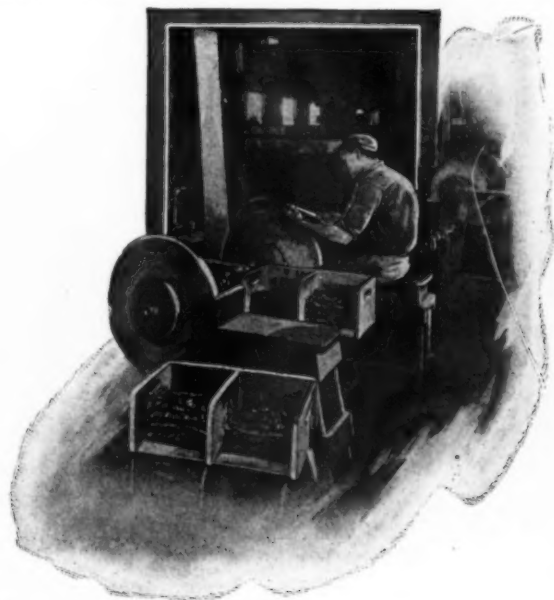


Grinding and Polishing "Steelforged" Shear Blades.

arately. Now they are paired and screwed together and put into perfect shape. The shears are next polished, nickel plated or japanned, as the case may be, and then finished. Experts take each shear and adjust the blades so that they come together in a perfectly straight line without gnawing or grinding. The cutting qualities of the shear are then thoroughly tested, so as to make sure that the finishing is properly done. The shear is now ready for its final inspection. It is

therefore take and hold the keenest possible edge. Thus we have a cutting edge that will stay sharp for an indefinite time. After welding, the blade must be trimmed of all surplus metal to restore its proper shape. This done, the screw hole is then drilled. While this is apparently a simple operation, it is done with utmost care and precision, for the position and size of the hole must be exact to the thousandth part of an inch; otherwise the

After the frame has been forged, a piece of the finest crucible steel is welded to the inside of the blade. This forms the cutting edge. The two pieces, after welding, become one, forever inseparable. Crucible steel is used because it takes a very high degree of temper, and can



gone over carefully, and should any defects be discovered, it is discarded, to be sold as a "Second."

All products designated as "steel-forged" are made in the manner here described. Solid steel patterns

the matter of "drives" for gifts and donations to various causes. This system has saved us not only lots of valuable time, but has assisted us to keep our advertising expense limited to the field from which we



Showing How "Steelforged" Shears May Be Twisted Without Breaking Them.

differ from "steel-forged" in that they are made entirely of crucible steel instead of being a combination of special steel frame and crucible cutting edge.

Whitfield Tells How to Reduce Expenses Without Cutting Business.

E. M. Whitfield, President of the Whitfield Hardware Company, Sioux Falls, South Dakota, is one of the successful retail hardware dealers who have given the matter of reduction of expenses real constructive consideration and his remarks before the recent Annual Congress of the National Retail Hardware Association at Louisville, Kentucky, are of high value to other dealers who have been cudgeling their brains to find some means by which the ever-mounting cost of conducting a hardware business may be limited to a reasonable figure.

Unnecessary delivery, ill-considered, badly placed advertising, and fire insurance policies in companies charging excessive rates are the three causes for high expenses to which Mr. Whitfield calls special attention. Excerpts from his address follow:

"With the exception of those who conduct their business in the very small town, we are all obliged to maintain some sort of delivery service. A large number of deliveries which we now make are positively uncalled for. The delivery of a fifty cent article which our customer might just as well have carried home is the type which makes the cost of service such a heavy item. We cannot do away entirely with delivery accommodations, especially in the city, for the public will not permit such a thing. But we can reduce to a minimum, through the helpful cooperation of the buying public the expense of delivery, by urging our customers to call upon us for service only when it is really necessary.

"Advertising is another necessary expense and it is one which completely justifies itself. But there is primarily only one true medium for retail hardware men to employ steadily and consistently, and that is the local newspaper. Such advertising is a necessary expense, but advertising which is bought merely to help a friend or to accommodate some institution to get out a book, program or the like, is money given away and cannot be classed as an ordinary expense. It is charity advertising. In our city we have through our association of retailers suppressed to a great extent the advertising schemes. Our association board carefully considers all advertising promotion plans and to those that can show real meritorious service they give a permit to solicit from members of the association. Unless this permit is shown the retailer will not even consider the proposition. This plan also is carried out in

receive the best results—namely, the newspapers.

"Let us make an especial effort to reduce our advertising expense by *placing* our advertising instead of just *buying* it for charity's sake.

"Insurance is an expense which some, no doubt, will consider an unnecessary one, and one which could be greatly reduced through the carrying of less insurance. To carry less insurance than you need is to open the way for increased expense, which would in the event of a fire be a loss beyond recovery. Do not make a mistake of reducing the amount of insurance carried on your stock, but rather see that you have complete protection, for it is your "one best bet." You *can* cut the cost of insurance, however, by buying from your hardware mutual companies. See your secretary in regard to this matter. He will gladly explain how you can save money."

Walter Fors Makes Bishop Saw Sing for Finnish Folk.

A Finnish convention is held each year about the middle of June in Chicago or in one of the adjacent cities. This year the convention was held at DeKalb on June 25th.

Mr. Walter Fors, who has represented the Ohlen-Bishop people throughout this territory for a number of years, was on the program, as he always is at these gatherings of the Finns.

Not only did Mr. Fors entertain with his usual stunt on the violin, but he was on for a special number.

When his wife was seated at the piano and he came to the front of the platform, everybody was surprised to see that he carried a Bishop hand saw in place of his violin.

He remarked that he had found the Bishop saw to be so markedly good for the purpose for which it had been made that he had experimented to see if it were not also good for many other things and had found that there was a great deal of music in a Bishop hand saw.

He then gave his number accompanied by his wife.

His principal number was "The End of a Perfect Day," and as an encore he gave a number of old time Finnish folk songs.

There were quite a number of the carpentry brethren in the audience, and all declared that they would use only the Bishop saw hereafter so that they could entertain themselves during the noon hour by having old time Finnish airs on their saws.

While Mr. Fors modestly disclaimed that he had any particular merit in his hand yet it is surmised that there was the same cooperation between the man and the saw in this case as there is every other case where a Bishop saw is used.

Good Ideas for Window Display

Practical Lessons from Exhibits in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. How to Get More Passers-By to Come into Your Store.

BIG DISPLAY OF TOOLS INCREASES SALES.

How to get a big enough variety of articles in a window display to appeal to the different needs of the passers-by without creating an impression of confusing multiplicity is one of the most pressing problems which confront the window decorator.

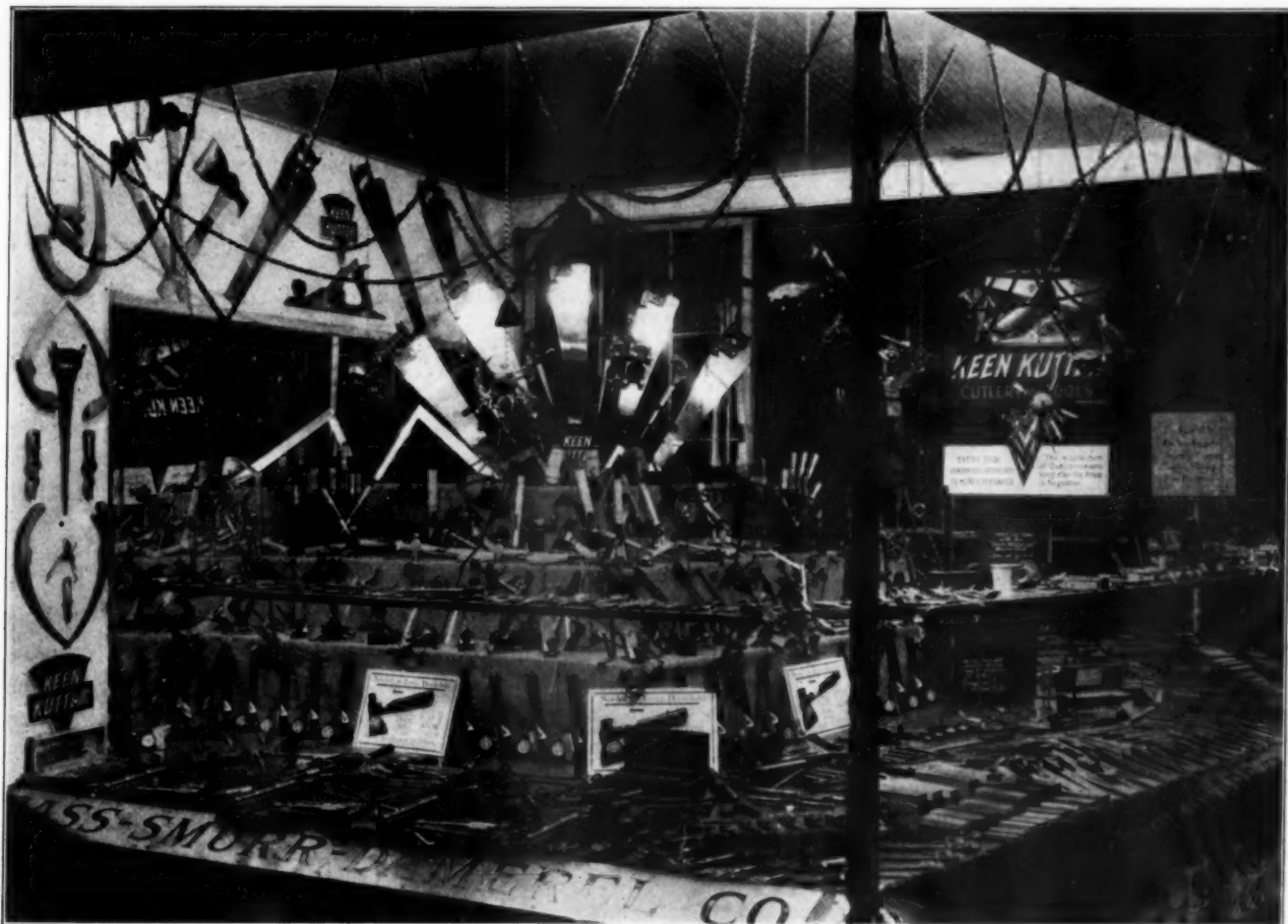
Too many details—especially when they lack the advantage of a unifying idea—are distracting and, there-

Occupying a place of prominence in this display is a placard which begets confidence.

It bears the words: "Every tool guaranteed satisfactory or money refunded."

The manufacturers' trade-mark and advertising helps are judiciously employed in the arrangement of the tools.

According to the description of Mr. Maccracken who designed the display, "the background was built up of a series of three steps covered with grey flannel upon



Window Display of Tools and Cutlery Designed and Arranged by Brooks W. Maccracken, for Cass-Smurr-Damerel Company, 412 South Broadway, Los Angeles, California.

fore, defeat the purpose of the window display.

By the exercise of sound judgment, this undesirable effect can be avoided and in its stead an appeal can be made which carries the thought of service through complete and comprehensive supplies.

The window exhibit depicted in the accompanying illustration produces the impression of ample stock covering practically every requirement of the user of tools.

It was designed and arranged by Brooks W. Maccracken for Cass-Smurr-Damerel Company, 412 South Broadway, Los Angeles, California.

which were hung and placed tools of various description.

"On the floor of the window were displayed screw drivers, wrenches, carborundum stones, and a full assortment of cutlery.

"Suspended from the ceiling against both the front and side windows was a twelve inch shelf the same length as the windows. On one of the shelves were shown pliers of various sizes and forms. The other shelf was used to display safety razors, plain razors, hair clippers, shaving soaps, cream, and shaving brushes."

Exceptionally effective illumination was produced by the use of two plate glass mirrors at the side and rear of the display.

All during the time that this display was on exhibit there was a steady increase in the volume of sales of practically every article shown.

Schoedinger-Marr Sells Out to Frank P. Hall Company.

The Frank P. Hall Company, which operates two hardware stores in Columbus, Ohio, has bought the business of the Schoedinger-Marr Hardware Company, which for many years has been located at 100 North High Street, in that city.

The physical transfer of the stock will be gradual and it is not expected that it will be completed until January 1, 1922.

F. O. Schoedinger states that he was influenced to sell by the fact that the business of the F. O. Schoedinger Company, of which he is also president, has grown to such proportions that it required his entire attention. The latter company manufactures ventilators and many other sheet metal products which are well known in the Central West.

Galvanized Vessels Are Not Necessarily Dangerous as Containers for Food.

A letter has been received from one of our subscribers in which he refers to a statement made in the *Bay City (Michigan) Times* as to possible poisonous effect of galvanized vessels on milk standing over night in such vessel.

The statement follows:

"If milk is allowed to stand over night in a galvanized vessel would the milk have any poisonous effect?"

"Answer—Neither galvanized nor aluminum ware will have any injurious effect on milk or other foods contained or cooked therein."

Our subscriber's letter follows:

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Being a subscriber to your valuable journal, I enclose a clipping from our local newspaper, *The Bay City Times*, of recent date, which contains misleading information as to galvanized ware.

I have always believed in my forty years' experience that same was unfit even to contain drinking water, to say nothing of cooking food in galvanized utensils.

The clipping in question appeared in a "medical column" and I think same comes to our local paper in form of what is known to the printers as "boiler plate."

Yours truly,

C. R. LADERACH.

Bay City, Michigan, June 24, 1921.

Inquiry at the Milk Bureau and the Chemical Research Laboratory of the Chicago Health Department failed to reveal any record of poisonous effect from storing or cooking food in galvanized vessels.

In fact, the statement is made in Peterson & Haines' *Toxicology*, Volume 2, one of the best authorities on poisons, that milk will stay sweet longer in a galvanized vessel than in one made of earthen ware.

However, this point is worthy of attention that because of the unevenness of the surface, any galvanized vessel is difficult to clean by ordinary means, and that dirt is, therefore, likely to stick which may bring on chemical reaction in the food.

During the Great World War, galvanized ash cans were frequently used for serving coffee, soup and drinking water, and to the writer's knowledge, there is no record of anybody having been poisoned, as the result of such use.

Editor's Note: We shall be glad to hear from any one who may have reliable data at hand on this subject.

Successful Hardware Firm Tells How Advertising Pays.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

We thank you most heartily for the generous applause you gave our advertisement on page 17 of the AMERICAN ARTISAN AND HARDWARE RECORD of June 11. Such recognition is indeed gratifying to us and, we hope, helpful to your readers.

In this connection it may prove interesting to you to know the results of the campaign on screen doors, garden hose and lawn mowers of which this advertisement was a part.

Up to date we have disposed of about 400 screen doors and almost 10,000 feet of cotton lawn hose, and greatly stimulated the sales of lawn mowers. Immediate results such as these are always encouraging, but the hardware dealer embarking on a similar campaign must not forget the cumulative value of all advertising. For instance, the screen door campaign helped to sell window screens, screen wire and the like and will undoubtedly continue to do so as long as the season is on.

In our opinion a good advertisement must educate, must convince, must be easy to read, and must back up the arguments with prices that are right. Such advertising, backed up by an intelligent sales force that is willing to go out of its way to make it easy for the customer to buy at a store can not help but yield profitable returns for the advertiser.

Continuity is very important. You can't hang a screen door with one hinge, nor can you build a business on one advertisement.

In fairness to the man behind the pencil it is only fair to add that McGowan Brothers' advertising is all written and designed by Mr. Ernest Tomowske of the Tomowske Advertising Agency of this city.

Yours very sincerely,

McGOWAN BROS. HARDWARE CO.

By T. W. McGowan.

Spokane, Washington, June 17, 1921.

Opens Hardware Store and Sheet Metal Shop.

With every prospect for successful business, the Weller Hardware Company has started a hardware store and sheet metal shop at 1004 Division Street, Stevens Point, Wisconsin.

W. E. Sweet Claims Thompson's \$1,000.00 for Texas Girl.

W. E. Sweet, of W. E. Sweet & Sons, Seneca, Missouri, does not think that John R. Thompson, the arm chair restaurant man of Chicago, is right in his contention that no one should be allowed to possess revolvers. He sent us a clipping from the July third issue of the St. Louis *Post-Dispatch*, containing a story about a nine-year-old girl, Rose Bredlove, whose home is at Alba, near Fort Worth, Texas.

This young lady forced a burglar to drop the loot which he had gathered in the dining room. She was alone in the house and if she had not had the revolver and the "nerve" to use it, the burglar would have gotten away with property of considerable value.

Mr. Sweet says in his letter that Miss Bredlove has furnished the very best reason—and one that can not be controverted—for permitting law abiding people to have revolvers in their possession, and that, therefore, Brother Thompson should send her the check for the \$1,000 which he promises to pay to any one who could give a good reason why the manufacture of revolvers for commercial purposes should be prohibited.

We wonder if Mr. Thompson had not better tend to his lunch room business and see if there might not be a few places where he ought to reduce prices on his food, rather than making himself conspicuous by talking about something of which he knows little or nothing.

Gets Charter of Incorporation.

National Hardware Company of Paris, Texas, has been incorporated with a capital stock of \$250,000 by J. D. Gee, J. W. Janes, and R. A. Harvey.

Trade Opportunities in Foreign Lands.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

35076.—A hardware merchant in Belgium desires to secure an agency from manufacturers for the sale on commission of articles and supplies for building, bolts, handles for windows, bells, and furniture; ornaments for furniture; hinges, taps, etc; and tools for joiners, gardeners, and masons. Correspondence should be in French.

35078.—The purchase is desired by a mercantile company in Canada of woodworkers' vises. Quotations should be given f. o. b. port of shipment. Cash to be paid. Shipment may be made all rail. Reference.

35089.—A mercantile company in Spain desires to secure an agency for the sale of razors (not safety); all sizes of screws and bolts for wood and iron. Quotations should be given c. i. f. Spanish and f. o. b. New York. Terms: Payment against documents at Spanish port or in New York. Correspondence should be in Spanish or French. References.

35093.—A commercial agent from Venezuela who has been in the United States for some time is about to return to Venezuela and desires to secure an agency for the sale of hardware. References.

35109.—A commercial agent in Italy desires to secure the representation of firms for the sale of hinges and general hardware. Quotations should be given c. i. f. Sicilian

ports, or Liverpool. Payments to be made against documents, 3 days, port of arrival. References.

35118.—An importing firm in Italy desires to secure an agency for the sale of hardware and kitchen utensils. Correspondence should be in Italian. References.

35128.—An agency is desired by a merchant in Ireland for the sale of an iceless ice-cream freezer. Quotations should be given c. i. f. port of Ireland. References.

Coming Conventions.

Sheet Metal Contractors' Association of Ohio, Hotel Gibbons, Dayton, Ohio, July 19, 20, and 21, 1920. William J. Kaiser, Secretary, 123 East Chestnut Street, Columbus, Ohio.

Michigan Sheet Metal Contractors' Association Annual Outing, Grand Rapids, Michigan, July 29 and 30, 1921. Frank E. Ederle, Secretary, 1121 Franklin street, S. E., Grand Rapids, Michigan.

Kentucky Hardware and Implement Association, Jefferson County Armory, Louisville, Kentucky, January 24, 25, 26, and 27, 1922. J. M. Stone, Secretary-Treasurer, Sturgis, Kentucky.

West Virginia Hardware Association Convention and Exhibition, Wheeling, January 31, February 1, 2, 1922. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Nebraska Retail Hardware Association Convention, Lincoln, February 7, 8, 9, 10, 1922. George D. Dietz, Secretary, 414-417 Little Building, Lincoln, Nebraska.

Michigan Retail Hardware Association Convention and Exhibit, Grand Rapids, Michigan, February 7, 8, 9 and 10, 1922. Karl S. Judson, Exhibit Manager, 248 Morris Avenue, Grand Rapids, Michigan. A. J. Scott, Secretary, Marine City, Michigan.

Wisconsin Retail Hardware Association Convention and Exhibition, Milwaukee, February 8, 9, 10, 1922. P. J. Jacobs, Secretary, Stevens Point, Wisconsin.

Illinois Retail Hardware Association Convention, Hotel Sherman, Chicago, February 14, 15, 16, 1922. Leon D. Nish, Secretary, Elgin, Illinois.

Minnesota Retail Hardware Association Convention, St. Paul, February 14, 15, 16, 17, 1922. H. O. Roberts, Secretary, 1030 Metropolitan Life Building, Minneapolis, Minnesota.

Ohio, Hardware Association Convention and Exhibition, Columbus, February 14, 15, 16, 17, 1922. Headquarters, Deshler Hotel. Exhibition, Memorial Hall. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Missouri Retail Hardware Association Convention and Exhibition, St. Louis, Planters Hotel, February 21, 22, 23, 1922. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis, Missouri.

New York State Retail Hardware Association Convention and Exhibition, Rochester, February 21, 22, 23, 24, 1922. Exhibition at Exposition Park. Headquarters and sessions at Powers Hotel. J. B. Foley, Secretary, 412-413 City Bank Building, Syracuse, New York.

Retail Hardware Doings.

Iowa.

Harry H. Struwe of Renbeck has purchased the A. A. Moore hardware store. The new management will be known as the H. H. Struwe Hardware Company.

Missouri.

McCollister and Crutchfield have sold their hardware store to R. L. Thomasson of Versailles, who moved his stock from the Martin Hotel building to the building occupied by McCollister and Crutchfield where he is doing business.

Douglas Hardware Company at Rock Port, have purchased the Buckham building which is being remodeled.

Stacy Brothers have traded their hardware stock at Princeton to Clyde Sealock of Trenton for his farm.

Pennsylvania.

A. K. Miller and Harry Friedley of Greencastle have purchased the hardware business of the late William S. Pentz.

John L. Zeider of the Zeider's hardware store at 1436 Derry Street, Harrisburg, has purchased the old corner property at Fifteenth and Derry Streets and will erect a new store on that corner some time in the future.

Texas.

F. H. Leslie has purchased the stock of the Hillsboro Hardware Company at Hillsboro from Captain J. H. Wilson.

Gaylord and Meador is the name of the new hardware firm of Waco. W. E. Gaylord and Aubrey Meador are the two proprietors of the firm, having purchased the hardware store at the corner of Third Street and Austin Avenue from J. P. Carpenter.

Advertising Help and Comment

Send Us Copies of Your Advertisements. Let Us Help You Get Bigger Results by Advice and Suggestions. The Service Is Free. Don't Hesitate to Take Advantage of It.

In three words the Aurora Hardware Company condenses a volume of arguments in favor of the Copper Clad Range.

Aurora Hardware Co.

PLUMBING — TIN WORK

BUY BUT ONCE

Select the **COPPER CLAD RANGE**. This is the Range that has the copper lining. The Range that will not rust out. The Range that has its permanently gas light walls. The Range that looks the best. Bakes with the least fuel and lasts the longest. The Range for you to buy.

YOU ALL NEED GARDEN SEEDS

We have them—fresh and clean—the kind that will grow. We have the largest, cleanest, most complete, and, quality considered, the cheapest stock of Hardware in Central Nebraska. Come in and see!

Aurora Hardware Co.

PHONE 95

PLUMBING — HARDWARE — HEATING

The words are: "Buy But Once."

They sound the keynote of the company's advertisement which appeared in the *Aurora Republican*, Aurora, Nebraska.

Briefly, the text which follows gives the reasons why it is necessary to buy the Copper Clad Range only once.

It tells that, having a copper lining, the range will not rust out.

Attractive appearance and economy of fuel are additional arguments which help clinch sales.

Opinions may vary as to the advisability of mentioning garden seeds in the same advertisement.

The copy would probably be more persuasive if it were confined to the single topic of copper clad ranges.

* * *

The Abbott-Cooper Hardware Company, Hillsdale, Michigan, has an uncommonly strong selling argument in the advertisement reproduced herewith from the *Hillsdale News*, of Hillsdale, Michigan.

The words in heavy display type

at the top of the copy, "Paint, dress up your home," are cleverly carried out in the body of the text.

The comparison of dress in its effect upon appearance is naturally and smoothly set forth in the words which follow:

"The long, dreary winter with its frequent climatic changes, no doubt, has left your home looking a bit shabby. It needs a new dress—something that will make it sparkle with the new season."

This appeal is further strengthened by the argument that at a small outlay the home can be saved from decay.

In the original this advertisement measured 6 x 4 inches, so that its type was very easy to read.

PAINT

Dress Up Your Home

The long, dreary winter, with its frequent climatic changes, no doubt, has left your home looking a bit shabby. It needs a new dress—

Something that will make it sparkle with the new season.

And then, too, at a small outlay you will be able to save your home—Remove the dirt and grime of winter snows.

We have a new stock of

HARDY PAINT

Outdoor and Indoor Work.

VARNISH AND STAINS

Abbott-Cooper Hardware Co.

HILLSDALE'S BARGAIN HOUSE

There is just enough emphasis in the make up of the advertisement to halt the attention of the reader and not enough to overwhelm him with needless shrieking of type.

* * *

The original of the Franzen Hardware Company's advertisement, shown here in reduced size, occupied a space 6 by 4½ inches in the *Riverside Enterprise*, Riverside, California.

What catches the eye of the reader first is the statement of prices in extra heavy type.

Naturally, one is tempted to find

out what articles are offered for such small sums.

Therefore, few persons fail to read the Friday and Saturday Specials listed in lighter type to the left of the bold figures.

Roofing Materials

We would be glad to supply you with materials to repair or re-cover your house, garage or barn.

We have all weights of Roofing, one-half, one, two and three ply Pioneer Rubber, Sanded, also Asphaltum in liquid and hard form, Roof Putty and Paints, Asphalt Saturated Paper.

Galvanized Corrugated Iron makes a very durable roof. We have it in several lengths.

FRIDAY AND SATURDAY SPECIALS—

A good Carpet Sweeper, regular value \$4.85, for	\$3.67
2½ quart extra heavy Aluminum Sauce Pan, regular \$1.90, for	\$1.38
8-cup heavy Aluminum Coffee Percolator, regular \$4.75, for	\$3.54
Aluminum Measuring Cup, regular 20c, for	15c

Door Mats
Foot Scrapers
Glidden's Paints,
Enamels and
Varnishes

Franzen Hardware Co.
"THE BUSY STORE"
Phone 542 738 Main St.

This advertisement is well spaced.

It has practically only one emphasis, namely, the price quotation.

That, after all, is the main inducement.

Hence, rightly it receives the main accent of the message of the Franzen Hardware Company.

Incidentally, a number of articles are mentioned which help give an idea of the store's comprehensive stock.

* * *

Most men are very ready with advice; and what men like best is not to listen to advice from others, but to have others listen to their own. If you go to a man's house at midnight and call him out of bed and inform him that you are in need of counsel and have come to him because he is the one man in town who has the wisdom which you need, he will not be irritated at the untimely summons, but pleased and flattered. Listen to advice, then, not for the advice alone but because men like to give advice and because you compliment them by your mute attentiveness.—*Personal Efficiency*.

Nesbit Turns Heavy Guns Upon National Warm Air Heating and Ventilating Association.

Former President of Western Warm Air Furnace and Supply Association Questions Good Faith of Manufacturers.

Since the attempt on the part of the Western Warm Air Furnace and Supply Association to have an Installation Code put through the State Legislature of Nebraska last winter, there has been considerable discussion as to whether the manufacturers, as represented by the National Warm Air Heating and Ventilating Association, were acting in good faith with the installers when they failed to support the measure.

It is claimed by members of the Western Association that the National Association not only helped to kill this particular bill, but that it was opposed, as a body, to the enactment of any law pertaining to the installation of warm air furnaces.

That this belief is erroneous was proven by the resolution passed at the Cleveland meeting on May 24th, and also by the definite statement by Secretary Allen W. Williams at the Annual Convention of the National Association of Sheet Metal Contractors in which he urged that the latter body appoint a strong committee to work with similar communities of other organizations, in order that an Installation Code may be formulated which would be fair to manufacturers, installers and users alike.

Edward Norris, Chairman of the Legislative Committee of the National Warm Air Heating and Ventilating Association, in his letter published on page 22 of our July 2nd issue, also makes this point clear.

Another letter touching on the same subject and questioning the sincerity of purpose of the manufacturers, as represented by the National Warm Air Heating and Ventilating Association, was received too late for publication in our July 2nd issue, but is published herewith, in order that AMERICAN ARTISAN AND HARDWARE RECORD may once more demonstrate that this is one trade journal where both sides may have their say—let the chips fall where they may.

This letter which is from F. L. Nesbit, of the Standard Furnace & Supply Company, Omaha, Nebraska, former President of the Western Warm Air Furnace and Supply Association, follows herewith:

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Referring to your report of the National Warm Air Heating and Ventilating Association in your issue of May 28th, also to your issue of June 11th, which contains Mr. Hussie's answer to some of that report, and to your willingness and interest offering space to all others who wish to express their idea on this important question.

I had not looked upon the resolution introduced by Mr. Norris and finally passed by the National Warm Air Heating and Ventilating Association as anything but an evasion of the real facts and an insult to the Western Warm Air Furnace and Supply Association, an organization devoted to the up-building of the warm air heating industry. Also an organization that fathered the introduction of the bill introduced in the

Nebraska Legislature at its last session.

The following is a small part of the resolution adopted by the National Warm Air Heating and Ventilating Association, which reads as follows:

"That the legislative committee working with Professor Willard and the proper committees of the American Society of Heating and Ventilating Engineers, the National Sheet Metal Contractors and other interested bodies, prepare a code acceptable to all interested parties and protective to the interests of users, installers and manufacturers."

Now, while the Western Warm Air Furnace and Supply Association was responsible for this bill being introduced in the Nebraska Legislature and is heartily in sympathy with same, it does not claim full credit for the bill, as the committee which framed it after several meetings was a joint committee composed of members of the Western Warm Air Furnace and Supply Association, National Sheet Metal Contractors' Association and the National Warm Air Heating and Ventilating Association and was adopted unanimously by this joint committee. Excepting the writer and those representing the National Warm Air Heating and Ventilating Association, the men composing this committee have had more real experience, more real success and have a more practical knowledge of the installation of warm air furnaces than any other like number of men in the United States, even though they might be picked from the University of Illinois, the American Society of Heating and Ventilating Engineers, or the National Warm Air Heating and Ventilating Association.

I believe the majority of the men on this joint committee, because of their years of practical experience have accumulated more knowledge in regard to the installation of warm air furnaces than Professor Willard, or any other professor can accumulate in any University in the United States in a natural lifetime, and because their experience has been over a wider range of different kinds, classes and descriptions of buildings with real installations and in which they had to be responsible for the heating of these buildings and have proved their knowledge by the successful heating of hundreds of buildings scattered in a wide territory. Such experience can not be obtained from an experimental station in any one building or class of buildings. There was one man on that committee who is successfully heating with warm air a building more than one hundred feet wide and one-eighth of a mile long, with much glass surface, and to the entire satisfaction of all concerned.

No installer of warm air furnaces throughout this country can ever get or have exactly the same building, same construction and the same general conditions as is obtained at the testing plant or plants at the University. For this reason, I can not see where any great

benefit on the majority of the tests made will be of much service to the installers.

I do believe, however, if the National Warm Air Heating and Ventilating Association would allow Professor Willard to test each and every one of their heaters and tell the manufacturers absolutely how many square inches of warm air these heaters would deliver to the pipes taken from the bonnet of the casings, and if these manufacturers would publish this rating in their catalogues as absolute and guarantee the furnace to produce so much heated air at the base of the pipes, that this would have rendered a great service to every installer of furnaces, as well as to the manufacturers and ultimate consumers.

As to the National Warm Air Heating and Ventilating Association looking to or asking advice from the American Society of Heating and Ventilating Engineers, this sounds good. The name of that institution indicates that it should and undoubtedly does know a great deal about heating and ventilating. However, I have never yet been able to find in print in any of their programs for meetings, where they have paid any particular attention to the warm air system. This Society is in reality an Association of steam and hot water heating engineers, and although in the last few years they have in a few instances recognized warm air heating, and I understand that some of their local chapters do consider and have a great many discussions on warm air heating, I believe to ask this Society to furnish a code for warm air heating would obtain very much the same results, as asking steamfitters of this country to adopt a code for warm air heating.

Personally, I believe the word *engineering* is a very much abused word and I see that my friend, Allen Williams, Secretary of the National Warm Air Heating and Ventilating Association, in his annual report refers to:

The installation formula and recommends that his Association publish one as soon as practical and in connection with same, great importance be given to good engineering when installing pipeless furnaces be pointed out and general rules for it included.

This reminds me of the colored man who claimed to be an engineer; when asked what kind of an engineer, he replied a Sanitary Engineer. When asked what he was doing along these lines, he replied that he was driving a garbage wagon. I believe that a heating engineer on a pipeless furnace should have about the same standing to a real heating engineer as the driver of a garbage wagon would have to a sanitary engineer. I believe Mr. Williams should have called for a house wrecking engineer to cut out walls, floors and partitions so as to deprive the home of all privacy.

Since the National Sheet Metal Contractors' Association at their recent meeting in Pittsburgh passed unanimously:

A resolution declaring in favor of state legislation and that the most important item in such legislation would be a clause compelling those who wish to engage in the business of installing warm air furnaces to stand an examination before a board appointed by the state for that purpose and allowed to engage in that business after demonstrating ability to install furnaces in accordance with the terms of the state law and that this Association announces its determination to ask for the enforcement of this clause.

The home owner is entitled to this protection. As it is now, his comfort, his health, are daily endangered, and this Association believes that competent furnace dealers

and home owners are both entitled to this protection against irresponsible and incompetent installers.

I know that the National Sheet Metal Contractors' Association will have the united support of the Western Warm Air Furnace and Supply Association on this resolution, not only with sympathy, but with time and money.

If the National Warm Air Heating and Ventilating Association wants to play with the manufacturers of pipeless furnaces *only* and cater to the trade of barbers, druggists, general contractors, furniture stores and a class of customers, who know nothing whatever of heating principles, let them come out in the open and so state—not get in the manger and pretend to be friends of the heating trade by using deceit with good language, and claiming to be in favor of good heating and good installation and at the same time working to prevent any good laws pertaining to same, suggested by other organizations.

Can the National Warm Air Heating and Ventilating Association tell the legitimate warm air heating contractors of this country, why they put on a committee to draft a code for good heating a representative from a firm who at least for many years has done nothing but tried to demoralize good warm air heating? Who advertise for salesmen but not heating men, knowing that a real heating man with a streak of honor in his system could not go out and make the ridiculous claims necessary to sell pipeless heaters for all classes of buildings.

Why are the manufacturers of pipeless furnaces *only*, allowed membership in any organization working for the upbuilding of the furnace industry?

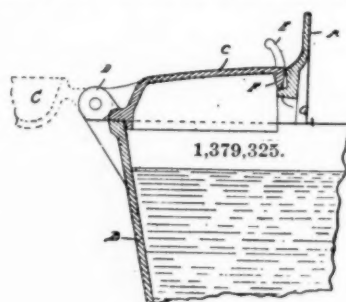
Yours truly,

F. L. NESBIT.

Omaha, Nebraska, June 29, 1921.

Assigns Patent for Water Pan for Hot Air Furnaces.

Under number 1,379,325, Harry L. Wood, Dowagiac, Michigan, assignor to Premier Warm Air Heater Company, Dowagiac, Michigan, a Corporation of Michigan, has secured United States patent rights for a water pan for hot air furnaces described as follows:



In a device of the character described, the combination with the wall of a hot air furnace, of a water pan projecting exteriorly therefrom, a closure for said projecting portion hinged at its outer edge to the

outer edge of said exteriorly projecting portion and provided with a flange around its entire inner edge, and means adjacent the wall of said furnace forming a seat for the closure.

The love of rural life, of honest work, the habit of finding enjoyment in familiar things, is worth a thousand fortunes of money or its equivalent.—Henry Ward Beecher.

Blower Fan Used With Battery of Six Warm Air Furnaces.

The building to be heated is a combination sheet metal shop and garage, including a large display room. The total space of the building is approximately 350,000 cubic feet. The building is occupied by the "Front Rank" Warm Air Furnace dealers in Yankton, South Dakota, Schuetz Brothers, who operate their shop as the Yankton Roofing Company, and their garage as the Meridian Garage.

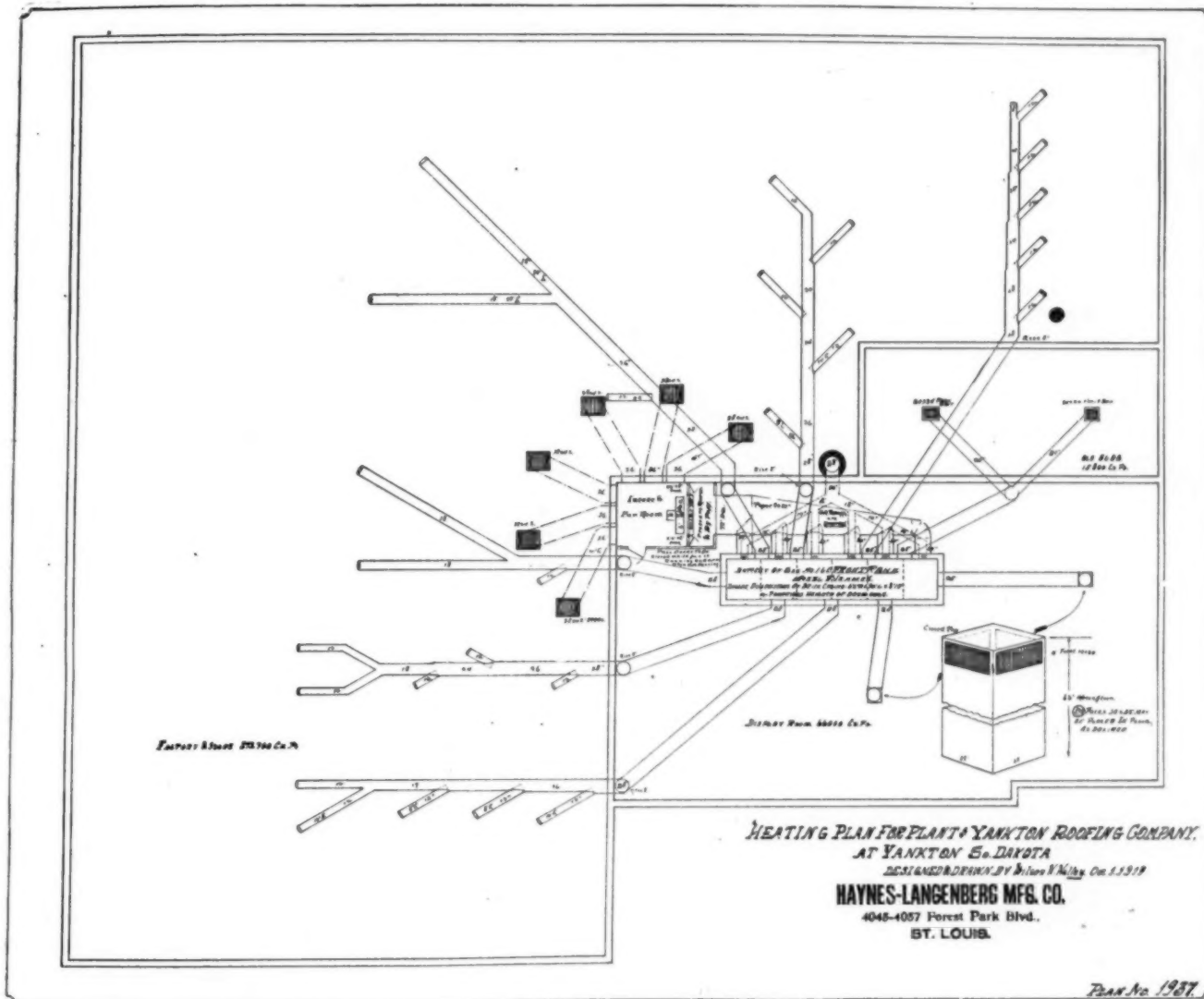
It is a very elaborate trunk line and fan system, the pipes in the garage being distributed so that the in-

garage to freezing or better, with two furnaces in use; they made it comfortable with four and so hot with the six that they opened the doors to cool it off.

New Lamneck Catalogue of Warm Air Furnace Fittings Will Soon Be Ready.

The W. E. Lamneck Company, Columbus, Ohio, manufacturers of Simplified Warm Air Furnace Fittings, have prepared a very complete catalogue of their entire line, which is now in the hands of the printers and will be ready for distribution in about five weeks.

This new book is twenty pages larger than their for-



Plan for Blower Fan Distribution of Warm Air in Garage and Sheet Metal Shop of Schuetz Brothers, Yankton, South Dakota.

terior will be as nearly equally heated as possible.

All of the cold air is taken from the garage building through the six large register faces and pipes. From there it is collected in the fan room, where it is blown through a slowly moving propeller fan seventy-two inches in diameter to the six large furnaces, heated, and discharged through the various air ducts. The fan room is provided with doors which are to be opened when the fan is not running so as to give added space for the air to pass by gravity.

Schuetz Brothers report that the heating system is working out even better than they had expected. On one occasion during the past winter when the mercury was eighteen degrees below zero, they heated the

mer catalogue, containing 96 pages in all. In addition to an elaborate showing of their furnace fittings, stove pipes, elbows and other accessories for furnace and stove dealers, considerable space is devoted to valuable information for installers of warm air heating and ventilating apparatus.

Dealers who desire to make sure of receiving a copy of this new catalogue are advised to send their requests to the W. E. Lamneck Company, West Fifth Avenue and Hocking Valley Railroad, Columbus, Ohio.

There is no easy way to success. The average man spends a lifetime earning his retirement.

Practical Helps for Tinsmiths

No Two Jobs Are Exactly Alike. Therefore, the Sheet Metal Worker Has to Meet Each Difficulty as It Comes. Send Your Problems to Us. Let Our Experts Help You.

PATTERNS FOR TAPERING ELBOW

By O. W. Kothe, Principal St. Louis Technical Institute and Instructor in the David Rankin, Jr., School of Mechanical Trades, St. Louis, Missouri. Written especially for American Artisan and Hardware Record.

On the range hood we considered some time ago was an elbow that transformed from 16"x16" to 8"x8", so we shall lay this out.

We first draw a right angle as A-X-B and describe the center arc A-B.

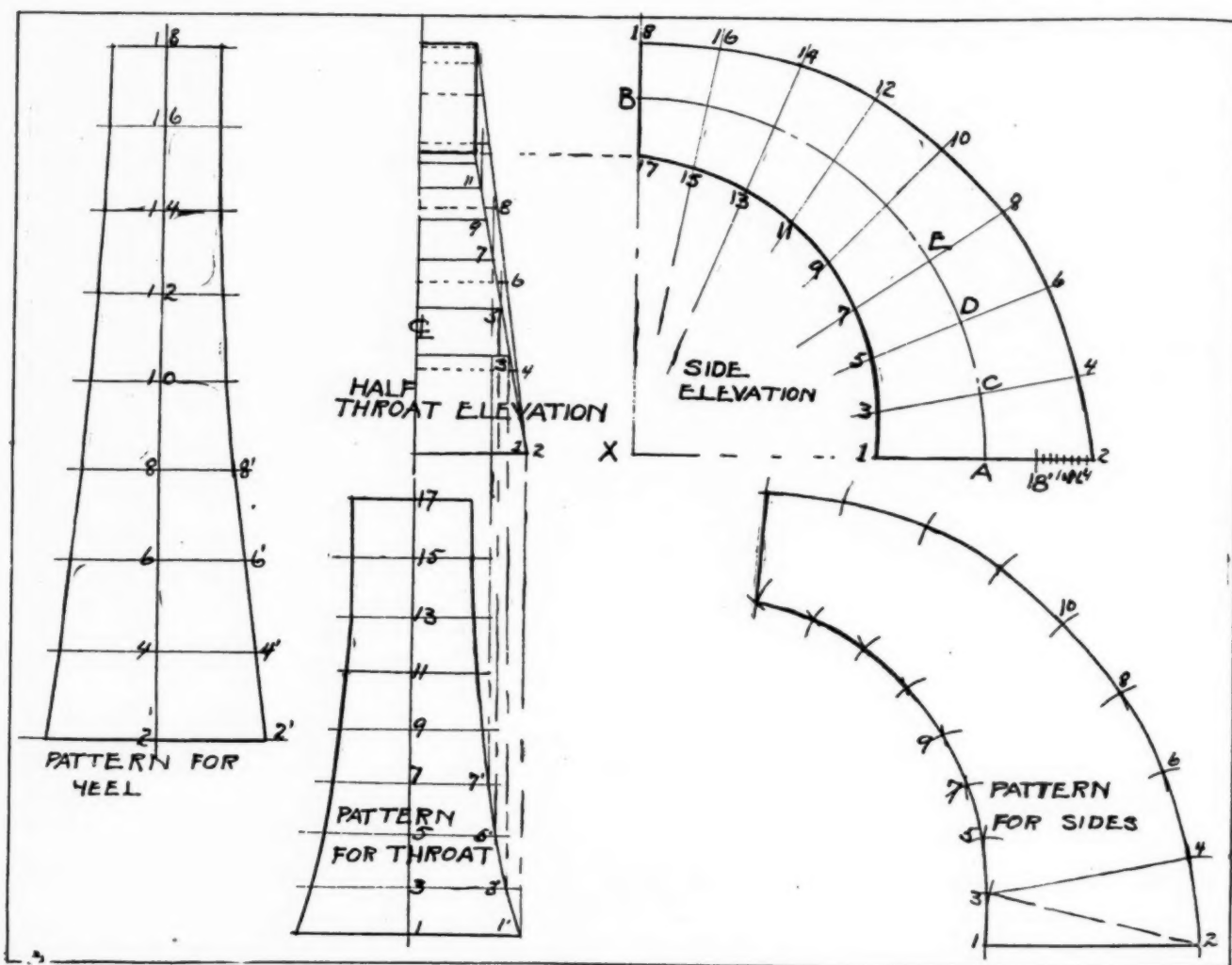
marked off and you can draw the outline for elbow.

Next draw a half throat elevation as shown. This is to show the flare of the sides.

The dotted lines represent heel lines, while the solid lines are throat lines. All are projected over from side elevation.

To set out the pattern for throat pick each space separately as 1-3-5-7-9, etc., and set in pattern below half front elevations as 1-17.

Draw stretchout lines and from each point as 1-3-5-



Patterns for Tapering Elbow.

Divide this arc in any number of equal spaces and draw radial lines from the corner X.

Our point is now to proportion our elevation to give both throat and heel a uniform curvature along the center arc.

So, pick the half small width as B-18 and set as A-18'. Divide this space 18'-2 in as many equal spaces as you have in radial lines of elevation.

Pick these distances as A-4 and set as C-4; C-3; also A-6 and set as D-6; D-5.

Continue in this way until all spaces have been

7-9, etc., in throat of elevation drop lines into stretchout as 1'-3'-5'-7', etc.

Through these intersections draw the outline for pattern as shown.

The pattern for heel is set out by picking the girth as 2-4-6-8-10, etc., from side elevation and setting it off as 2-8 in pattern.

With dividers pick the half true diameters of throat elevation, and set them as 2-2'; 4-4'; 6-6', etc.

Repeat this until all points are established and draw the outlines of pattern as shown.

In setting out the pattern for side no true lengths need to be developed, since the rise is so slight that only a slight shortage is produced in the dotted lines. So this can be dispensed with.

Pick the girths from patterns for heel as 2'-4'-6'-8', etc., also throat as 1'-3'-5'-7', etc., and use them in pattern for side.

The elevation lines as 1-2; 2-3; 3-4; 4-5; 5-6, etc., are just simply reproduced in a triangulating fashion and the pattern is done.

Laps for seaming must be allowed extra.

Well Planned Program for Convention of Ohio Sheet Metal Contractors.

The "Dope Sheet" which is the title of the printed program for the Annual Convention of the Ohio Sheet Metal Contractors' Association, shows that the Dayton



William E. Miller.

Committees, which are in charge of the business and entertainment features have planned exceedingly well.

There will be plenty of chances for everybody to have a good time, and the business sessions have been so planned that they will have interest for men in every branch of the sheet metal trade.

The comfort and pleasures of the visiting ladies have been well provided for, and it is only reasonable to expect that this will be the most successful Convention in the history of the Association.

William E. Miller, Dayton, Ohio, is the publicity man for the Convention and also one of the directors of the State organization.

The program follows:

Tuesday, July 19th.

9:00 a. m.—Register. Get badges and meet the "Gang." Mezzanine Floor, Hotel Gibbons.

1:30 p. m.—S. Eisenberger, Chairman, will open the Convention and will introduce the Honorable J. M. Switzer, Mayor, who will do the welcome stunt and a response will be made by our Local President, A. A. Smith, who will also introduce the State President, A. E. Munckel. After this, pay your attention to that worthy individual unless seeking information, in which case, seek one of the members wearing a reception badge.

Roll call of Officers and Delegates.

Officers' Report—President, Secretary, Coin Holder.

Appointment of Committees—To audit the books. Pass on credentials. Adopt resolutions.

5:00 p. m.—Stag picnic. This is to be some party. Oh what a time. Be at the Third Street entrance of the Gibbons Hotel at five bells sharp, on Tuesday, July 19th, and you will be whizzed in benzine buggies to Brenners' Grove where music, eats, and lily water will vie with each other for honors.

5:30 p. m.—Ladies' party. The same day and same place and time the ladies will assemble and be taken to

Rike-Kumler's for dinner, then to the theatre to see the Liberty Players—a fine stock company.

Wednesday, July 20th.

9:00 a. m.—Meeting of the secretaries of local lodges to discuss ways and means looking toward the betterment of our organization.

9:30 a. m.—Addresses by prominent men.

Business session.

Question Box.

Round Table discussions.

12:30 p. m.—All members and their ladies meet at Third Street entrance of hotel where autos will be waiting to speed you to the National Cash Register plant, where your picture will be taken. Through the ever thoughtful kindness of Mr. J. H. Patterson, President of the National Cash Register Company, we are to be his guests at luncheon. Immediately after, you will be shown through the model factory of the world, followed by an entertainment at the National Cash Register school house.

4:30 p. m.—Leave National Cash Register plant for headquarters.

6:00 p. m.—Listen, folks, here's a "darb."

Be at Third Street entrance of hotel 6:00 o'clock, then oh, girls and boys, to the Old Barn Club, a wonderful spot, a wonderful meal, a wonderful dance, wonderful music, and a wonderful time assured.

Thursday, July 21st.

9:00 a. m.—Addresses by prominent men.

10:00 a. m.—Unfinished business.

Election of Officers.

Selection of convention city for 1922. Au revoir.

1:00 p. m.—Assemble again for a trip to the Government Aviation Experimental Station. This will be worth while, as permission has been granted by United States Government to go through the factory and witness an exhibition of flying, after which you will be taken for a trip through the Soldiers' Home and ride through the Conservancy District. These dams are for flood prevention and second in size to Panama Canal. Other points of interest in and about Dayton.

Good night—Good-bye—Come again.

And Then.

Say, folks, we're awfully sorry to see you go—
We tried a pleasant time to show.
If you come here soon again,
We'll promise more fun to you women and men.

It's great to meet and great to chat,
To laugh until we all get fat.
Fun and frolic, laughter and cheer,
Make life worth living, year after year.

You are always welcome, friends galore,
And when we reach the other shore,
Let's have another convention there
And have all the fun that we dare.
(With apologies to the composer.)

Officers of Dayton Local—A. A. Smith, President; J. T. Foley, Vice President; Otto Young, Secretary; and L. P. Holtman, Treasurer.

Directors—F. J. Hoersting, Chairman; Harry Kenney, Charles Camerer, B. R. Rieck, and Jos. J. Schad.

Convention Committee—S. Eisenberger, Chairman; F. E. McBride, P. E. Sullivan, A. A. Smith, and F. J. Hoersting.

Reception Committee—Messrs. and Mesdames J. T. Foley, Walter Wuichet, J. F. Schlotterbeck, George H. Lockwood, Abe Kohn, Herman Santo, Otto Young, William Lett, George Bussinger, O. F. Zindorf, F. M. Deardorf, and Mr. Albert Vauble.

Ladies' Reception and Executive Committee—Mrs. F. J. Hoersting, Mrs. Otto Young, and Mrs. William E. Miller, assisted by all ladies of members of the Association.

Registration Committee—P. E. Sullivan, Chairman; Harry Kenney and Joseph Schad.

Transportation and Hotel Committee—A. A. Smith, Chairman; L. P. Holtman, William E. Miller, Charles Camerer, Henry Friehofer and William Earl Scott.

Entertainment and Publicity Committee—Frank B. McBride, Chairman; John R. Kenney, A. M. Couch, H. F. Barker and William E. Miller.

Speakers, Financial and Reception Committee—F. J. Hoersting, Chairman; J. T. Foley, Walter Wuichet, Albert Vauble, J. F. Schlotterbeck, George N. Lockwood, Abe Kohn, Herman Santo, Otto Young, William Lett, George Bussinger, C. F. Zindorf and F. M. Deardorf.

Program Committee—S. Eisenberger, Chairman; B. R. Rieck, Hyman Schriber and E. L. Ellsworth.

Articles of Agreement and Working Rules for Indianapolis Sheet Metal Men.

This Article Contains Full Set of Working Rules Between Employers and Employees in Indianapolis.

Joseph Gardner, President of the Indiana Sheet Metal Contractors' Association, has forwarded a copy of the "Working Rules and Articles of Agreement" which is in force between the Master Sheet Metal Workers' Association and their employees, as represented by Local Union Number 41, of Indianapolis.

As this agreement contains a number of very good features, we reproduce the entire document herewith:

THIS AGREEMENT made this first day of April, 1921, by and between the Master Sheet Metal Workers' Association of Indianapolis, Indiana, a member of the Building Contractors' Association and Builders' Exchange of Indianapolis, Indiana, hereinafter designated as the party of the first part, and Local Union Number 41, Amalgamated Sheet Metal Workers' International Alliance, a member of the Building Trades Council of Marion County, Indiana, hereinafter designated as the party of the second part, for the purpose of preventing strikes and lockouts and facilitating the peaceful adjustment of all grievances and disputes which may arise from time to time between the parties to this agreement.

WITNESSETH: The parties hereto agree that the following nine articles shall govern working conditions and wages for the period of this agreement:

Article I.

SECTION 1. There shall be no cessation of work pending the settlement of any question or dispute. All questions that may arise shall at once be referred to the proper committee of employers and employees for settlement. Upon failure of said committee to agree, the matters to be decided by arbitration in the usual way.

SECTION 2. There shall be no limitation to the amount of work a man shall perform during his working day.

SECTION 3. There shall be no restriction of the use of machinery or tools.

SECTION 4. There shall be no restriction of the use of raw or manufactured materials, except prison made.

SECTION 5. No person shall have the right to interfere with workmen during working hours.

SECTION 6. The foreman shall be selected by and be the agent of the employer.

SECTION 7. The use of apprentices shall not be prohibited.

SECTION 8. All workmen are at liberty to work or cease to work for whomsoever they see fit; and employers are at liberty to employ or discharge whomsoever they see fit, in accordance with the terms of this agreement.

Article II.

SECTION 1. The party of the second part claims jurisdiction over all work duly awarded to it by the Building Trades Department of the American Federation of Labor, and in accordance with the most recent awards of the National Board of Jurisdictional Awards in the Building Industry, and in accordance with any local agreement that may be made between the party of the second part and any other Local Union.

SECTION 2. Both parties hereto agree that any working rules now in existence, in conflict with the terms of this agreement, shall not be operative, and each party agrees that it will not adopt any working rules for the control of its members that will conflict with the terms or application of this agreement, shop regulations excepted.

SECTION 3. One member of each firm, of the party of first part, shall be permitted to work with tools on any sheet metal work during regular working hours.

SECTION 4. No member of any firm of the party of first part shall hold membership in the Union. No member of the party of the second part shall hold membership in the Master Sheet Metal Workers' Association.

SECTION 5. It is agreed by and between the parties that the territory covered by this agreement shall be Marion County and vicinity, State of Indiana.

SECTION 6. The duly authorized business agent of Local Union Number 41 shall be allowed to visit work at all times, but must not interfere with the progress of the work.

SECTION 7. The jurisdiction claims as herein set forth are assumed to be generally accepted practices, but nothing herein contained shall be construed as an obligation on the part of the party of the first part to defend the party of the second part in the enforcement of such jurisdiction claims in any dispute that

now may be pending or that may arise in the future between the party of the second part and any other labor organization.

SECTION 8. Nothing in the jurisdiction claims set out in this agreement shall be construed to cover any manufactured materials not manufactured in the shops of the party of the first part, covered by this agreement.

SECTION 9. The party of the second part agrees to furnish the party of the first part as many first-class workmen as required by the party of the first part, and upon failure to do so after forty-eight hours' notice, party of the first part will be at liberty to employ workmen other than members of Local Union Number 41. Party of the first part will not object to men so employed becoming members of Local Union Number 41.

Article III.

SECTION 1. Eight hours shall constitute a day's work, to be counted between the hours of 8:00 A. M. and 5:00 P. M., and on Saturdays the working hours shall be from 8:00 A. M. to 12:00 M. o'clock.

SECTION 2. Time and one-half shall be paid for all work done after the specified working hours, except where shifts are employed.

SECTION 3. Double time shall be paid for all work done on Sundays and legal holidays and after 12:00 M. on Saturdays.

SECTION 4. The following shall be known as legal holidays: Memorial Day, Fourth of July, Thanksgiving Day and Christmas.

SECTION 5. No work shall be done on the first Monday in September, commonly known as Labor Day, except in case of absolute necessity for the protection of life or property, in which case the work is to be paid for at the rate of double time.

SECTION 6. Workmen must be at work on time, that is, at the job or shop ready to commence actual operations at the specified starting time.

SECTION 7. When two or more shifts are required on a job, the wages and number of hours and conditions of work shall be the same as those of day shifts. No workman shall work on more than one shift.

SECTION 8. Employer shall pay all car fare used in jobbing or removing from one job to another; from shop to the job, or from the job to the shop. Other car fare shall be paid by the workman providing the job can be reached by the Indianapolis Street Railway Company city system. Employer shall pay such additional car fare as may be required on suburban work.

SECTION 9. Board and full traveling expenses and all traveling time during regular working hours shall be paid all workmen on out-of-town work. It is understood that reasonable allowance be made by both parties hereto in the enforcement of this clause.

SECTION 10. Upon the failure of any member of the party of the first part to notify his men when they are to be laid off and through such failure on the part of the contractor or his foreman, members of the second part report and are not placed at work, they shall receive pay for two (2) hours' time; conditions on account of weather, etc., beyond contractors' control to be excepted in the operation of this article.

Article IV.

SECTION 1. The week ends Thursday evening and all workmen will be paid each week in cash at the shop or job, Saturday between 12:00 M. and 12:30 P. M.

SECTION 2. Actual work on all jobs is to continue on said jobs until 12:00 M. Saturdays.

Article V.

SECTION 1. The rate of wages paid by the party of the first part to the party of the second part shall be 92½ cents per hour.

Article VI.

SECTION 1. Every shop may have one apprentice, but the number shall not exceed one to every three (3) journeymen. This clause does not apply to helpers.

SECTION 2. Helpers shall not use tools except under the instruction of the journeymen or junior.

SECTION 3. After working at the sheet metal trade two years, an apprentice may make application to become a junior member of the Union. Said application shall be referred to a committee composed of two members of the party of the first part and two members of the party of the second part, who shall take the matter up with the applicant's employer and ex-

amine the applicant. If said applicant is eligible and can command half the wages of a journeyman, he shall then become a junior member of this Union. Under no circumstances shall an apprentice leave his employer unless he has just cause for doing so.

SECTION 4. At the end of the third year he may take an examination and, if found competent, he shall receive two-thirds the wages of a journeyman.

SECTION 5. At the end of the fourth year he may take an examination and, if found competent, he shall be advanced to a journeyman and shall receive not less than the rate of wages paid a journeyman sheet metal worker.

SECTION 6. Apprentices and juniors shall be given all possible aid by both parties to this agreement, in order that they shall become competent mechanics, and they shall be allowed to work in conjunction with journeymen or separately on any work given them within the trade, but apprentices shall not be sent to outside work except with journeymen or juniors. There shall, however, not be more apprentices than journeymen or juniors on any one job.

Article VII.

SECTION 1. Any differences that may arise between the parties hereto not covered by this agreement, shall be submitted to a joint arbitration board for adjustment, said board to be composed of five (5) employers, members of the Master Sheet Metal Workers' Association (party of the first part) and five (5) employees of Contract Shops, members of Local Union Number 41, A. S. M. W. I. A. (party of the second part), and their joint decision shall be considered final and binding upon their respective organizations. A call for a joint meeting may be made at any time by either organization upon the other, and when any grievances arise, no work shall cease pending final decision of the joint arbitration board.

Article VIII.

SECTION 1. When members of the party of the second part are called upon by the Amalgamated Sheet Metal Workers' International Alliance, the National Building Trades Department of the American Federation of Labor or the Building Trades Council of Marion County, to protect union principles, it shall be in no way a violation of this agreement.

SECTION 2. The abandonment of work by the Individual members of the party of the second part, either separately or collectively, by concerted or by separate action, on any building or buildings, being construed by or for any member of the party of the first part, or in any shops operated by the party of the first part, will be considered a breach of this agreement, unless the party of the second part, upon demand, furnishes within twenty-four (24) hours an equal number of competent men for such work.

Article IX.

SECTION 1. This agreement shall be in full force and effect from April 1st, 1921, to and including March 31, 1922.

SECTION 2. If any change is desired in this agreement, by either party, notice shall be served in writing ninety (90) days prior to its expiration.

In Witness Whereof, the parties hereto have affixed their signatures by their duly authorized committees, the day and date as above first mentioned.

B. F. Stockford, South Bend Sheet Metal Contractor Passes Away.

B. F. Stockford, South Bend, Indiana, for many years engaged in the sheet metal business in that city, died suddenly of apoplexy in his son's place of business on Friday, June 24th.

Mr. Stockford was seventy-seven years of age on June 9th and had been working at the sheet metal trade ever since he was sixteen years old and with his son, W. F. Stockford, had operated a shop in the present location in South Bend for the last twenty-seven years. The son only recently succeeded to the business and his father remained with him, going to his place of business every day.

As a tribute of respect to Mr. Stockford the Sheet Metal Contractors' Association of South Bend turned out 100 per cent to the funeral. Mr. Stockford was a well known figure in his own city and was particularly known for his activities in religious endeavors. He was very charitable and took great interest in institutions engaged in the taking care of the poor and unfortunate in his own community.

Pioneer Warm Air Furnace Man Dies After Long Illness.

Charles A. Sercomb, who for many years was a member of the old warm air furnace manufacturing firm of Schwab & Sercomb, at Milwaukee, Wisconsin, passed away recently at his home in Fort Myers, Florida, after several months' illness.

Mr. Sercomb retired from active business in 1901, when the enterprise was incorporated under the name of R. J. Schwab & Sons Company. He is survived by two daughters, Mrs. Charles Beggs, Jr., and Miss Emma Grace Sercomb, and one son, Charles R. Sercomb, all of Chicago.

Sure Worth the Money, Says Ladner.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Your paper is sure worth the money, and I thank you for past favors.

Yours truly,

E. L. LADNER.

—, Nebraska, June 30, 1921.

New Whitney Tinnners' Punch Is Placed on Market.

The W. A. Whitney Manufacturing Company have added a new size to their line of Tinnners' Punches, the

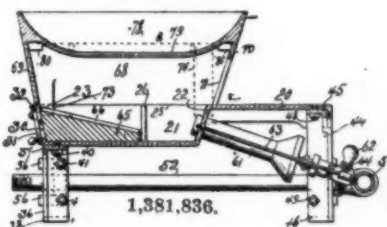


latest size being known as Number 3. This new punch is especially designed for use on

Whitney Tinnners' Punch Number 3. lighter sheet metal, being able to cut a $\frac{3}{8}$ -inch hole through 18 gauge iron. It has a detachable gauge, to vary the lines of holes, as to depth from edge of metal being punched. Extra punches and dies, in sizes from $\frac{3}{32}$ to $\frac{1}{4}$ inch, by $\frac{1}{32}$ gradation, can be obtained and easily changed on this very useful little tool. Further information may be secured from the W. A. Whitney Manufacturing Company, 715 Park Avenue, Rockford, Illinois, or from any hardware or sheet metal supply jobber.

Automatic Blast Soldering Furnace Is Patented.

Charles A. Hones, Rosedale, New York, has procured United States patent rights, under number 1,381,836, for an automatic blast soldering furnace described in the following:



In a furnace the combination of a table having a well formed therewith, legs for the table and well, gas supply piping for the furnace, detachable brackets connected to a pair of said legs supporting

said piping, a Bunsen burner connected to the gas supply piping and extending into the well and a pilot light for the burner.

Says AMERICAN ARTISAN Is a Very Valuable Paper.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Yours is a very valuable paper and it would be very hard for me to do without it.

W. S. STURDIVANT.

—, Oklahoma, June 27, 1921.

Learn from Rules You Expect Your Physician to Follow.

Above all, let us apply to ourselves the same rules that we expect the lawyer, the banker or the doctor to follow. We expect him to be the best informed and we expect him to keep reviewing what he has already learned; we expect him to be on the alert all the time as to what is going on so when the time comes that we need his services he can put every ounce of energy into the particular tasks assigned to him. After all, isn't that the whole problem as far as our daily lives are concerned? We are training ourselves from the time we get up in the morning to do something in a few moments' time. Most sales are the result of a few moments' negotiation. We have to concentrate into these few moments all of our arguments and all of our persuasiveness to meet what perhaps has been in the prospect's mind days and weeks.—Joseph P. Glaser.

Two Kinds of Success.

There are two kinds of success. One is the very rare kind that comes to the man who has the power to do. That is genius. Only a very limited amount of the success of life comes to persons possessing genius. The average man who is successful—the average statesman, the average public servant, the average soldier, who wins what we call great success—is not a genius. He is a man who has merely the ordinary qualities.—Theodore Roosevelt.

Lack of Sincerity Has Killed Many a Sale.

Talk and act in such a way that the customer will be impressed with the fact that you are telling the truth and representing each and every article just as it is. Lack of sincerity has probably caused the loss of more sales than any other reason. You can not afford to raise in the customer's mind the slightest doubt of the truthfulness of the statements made by you. You can not cultivate this qualification without sticking literally to the truth all the time.—Joseph P. Glaser.

Notes and Queries.

Vacuum Cistern Cleaner and Pump.

From Sheldon Brothers, White Lake, South Dakota.

We would like to know who makes a vacuum cistern cleaner and pump.

Ans.—Economy Pumping Machinery Company, 122 Curtis Street, Chicago, Illinois; Beach-Russ Company, 216 Broadway, New York City.

"Acorn" Warm Air Furnace.

From Dixon and Ratliff, Corner Chestnut and Fifth Streets, Gadsden, Alabama.

Kindly furnish us with the name and address of the manufacturer of the Acorn warm air furnace.

Ans.—Rathbone, Sard and Company, Aurora, Illi-

nois. All repairs can be furnished by the Northwestern Stove Repair Company, 654-666 West Roosevelt Road, Chicago, Illinois.

"New Departure" Coaster Brake.

From E. L. Severson, Hollandale, Wisconsin.

Can you advise who manufactures the New Departure coaster brake?

Ans.—New Departure Manufacturing Company, Bristol, Connecticut.

Ladder Hardware.

From E. L. Hyre, Saybrook, Illinois.

Will you kindly advise where I can purchase irons for ladders such as hooks, rollers, etc., also spruce pine lumber $1\frac{3}{8}$ to $1\frac{1}{2}$ inch in thickness, 6 to 12 inch in width and 16 to 20 feet in length?

Ans.—Brown Safety Ladder Manufacturing Company, 439 South Clark Street, Chicago, Illinois.

"Lennox" Furnace.

From Lawrence R. Smith, Browersville, Minnesota.

Can you advise who makes the Lennox furnace?

Ans.—Lennox Furnace Company, Marshalltown, Iowa.

Stamped Bottoms for Milk Buckets.

From Frank J. Ress, Tell City, Indiana.

Kindly tell me where I can obtain stamped bottoms for flaring milk buckets.

Ans.—Creamery Package Manufacturing Company, 61 West Kinzie Street, Chicago, Illinois.

Small Castings.

From George Whigelt, care of Inventors' League, 114 Maiden Lane, New York City.

Please furnish me with names of firms who make small castings including drilling, etc., of about twenty-five pounds each set.

Ans.—Illinois Malleable Iron Company, 1801 Diversey Boulevard, Chicago, Illinois; Ferguson and Lange Foundry Company, Clybourn Avenue and Wil- low Street at St. Paul tracks, Chicago, Illinois; Chi- cago Steel Foundry Company, Kedzie Avenue and 37th Place, Chicago, Illinois; Northern Malleable Iron Company, Wells and Forest Streets, St. Paul, Minne- sota; Iowa Malleable Iron Company, Fairfield, Iowa; Chicago Malleable Castings Company, 120th and Racine Avenue, Chicago, Illinois.

Trip Gong.

From William Duitsman, Forreston, Illinois.

Where can I buy a twelve or fourteen inch trip gong?

Ans.—Bullard and Gormley Company, 54 East Lake Street, Chicago, Illinois.

Material for Radiator Cores.

From S. W. Norris, United Sheet Metal Works, 914 West Market Street, Bloomington, Illinois.

We would like to know where we can buy copper and brass with the die work in it for making radiator cores.

Ans.—F. L. Curfman Manufacturing Company, Maryville, Missouri; The G. and O. Manufacturing Company, Replacement Department, New Haven, Con- necticut.

Trimnings for Light Metal Work.

From A. L. Honeker, 415 Cedar Street, Wallace, Idaho.

Will you please advise where I can procure trim- mings for light metal work such as catch or light latches for doors, legs, gauges for expansion tanks, brass hinges, and so forth.

Ans.—Rehm Hardware Company, 1501 Blue Island Avenue, Chicago, Illinois; Bullard and Gormley Com- pany, 54 East Lake Street, Chicago, Illinois.

Illustrations of New Patents

Watch This Page. Keep Yourself Informed Concerning Improved Devices Which May Save Labor in Your Shop or Add Another Source of Income to Your Retail Store.

1,378,650. Saw-Set. Christian Bodmer, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a Corporation of Connecticut. Filed April 22, 1920.

1,378,686. Clothesline Reel. Kazimieras I. Krizevicius, New Haven, Conn. Filed July 20, 1920.

1,378,846. Camping Utensil. William J. Feldkamp, Brantford, Ontario, Canada. Filed July 2, 1920.

1,378,850. Electrically Heated Appliance. Lindol French, East Pepperell, Mass. Filed July 17, 1919.

1,378,851. Sharpening Device for Razor Blades. Franz A. Fuller, Newark, N. J. Filed May 28, 1919.

1,378,879. Mop Wringer. Simeon C. Lawlor, Chicago, Ill. Filed February 17, 1919.

1,378,890. Clothespin. John Muck, Milwaukee, Wis. Filed December 2, 1919.

1,378,925. Washing Machine. Harry Wayne White, Emporia, Kans. Filed March 18, 1920.

1,378,973. Ax. William R. Munzer, Emetta, Minn. Filed December 20, 1920.

1,379,125. Handle Attachment for Screwdrivers. Peter Reinhalter, Wilkes-Barre, Pa., assignor to Peter Reinhalter Co., Wilkes-Barre, Pa. Filed September 15, 1920.

1,379,205. Sickle. John Ogden, Philadelphia, Pa. Filed April 18, 1919.

1,379,247. Washing Machine. Samuel D. Carpenter, St. Louis, Mo., assignor of one-third to Frederick E. Lamb and one-third to Frank A. Campbell, St. Louis, Mo. Filed October 11, 1920.

1,379,315. Pliers. Kserty Shaner, Washburn, Me. Filed February 19, 1920.

1,379,326. Animal Trap for Catching Rats, Mice, and the Like. Alfred M. Worcester, Cincinnati, Ohio. Filed March 5, 1921.

1,379,359. Puttyless Steel Skylight. Louis Partzschfeld, Jr., New York, N. Y. Filed December 13, 1918.

1,379,382. Vise. Franz Elob Bergstedt, Racine, Wis. Filed May 3, 1920.

1,379,482. Wrench. George H. Spong, Portsmouth, Va. Filed April 18, 1919.

1,379,539. Tool Holder. John J. Dolan, Sr., Duquesne, Pa. Filed September 15, 1919.

1,379,555. Lawn Mower Attachment. Allan Goodfellow, Norton, Mass. Filed October 24, 1919.

1,379,617. Sprinkler Head Shut Off. John Davidson, Providence, R. I. Filed December 18, 1919.

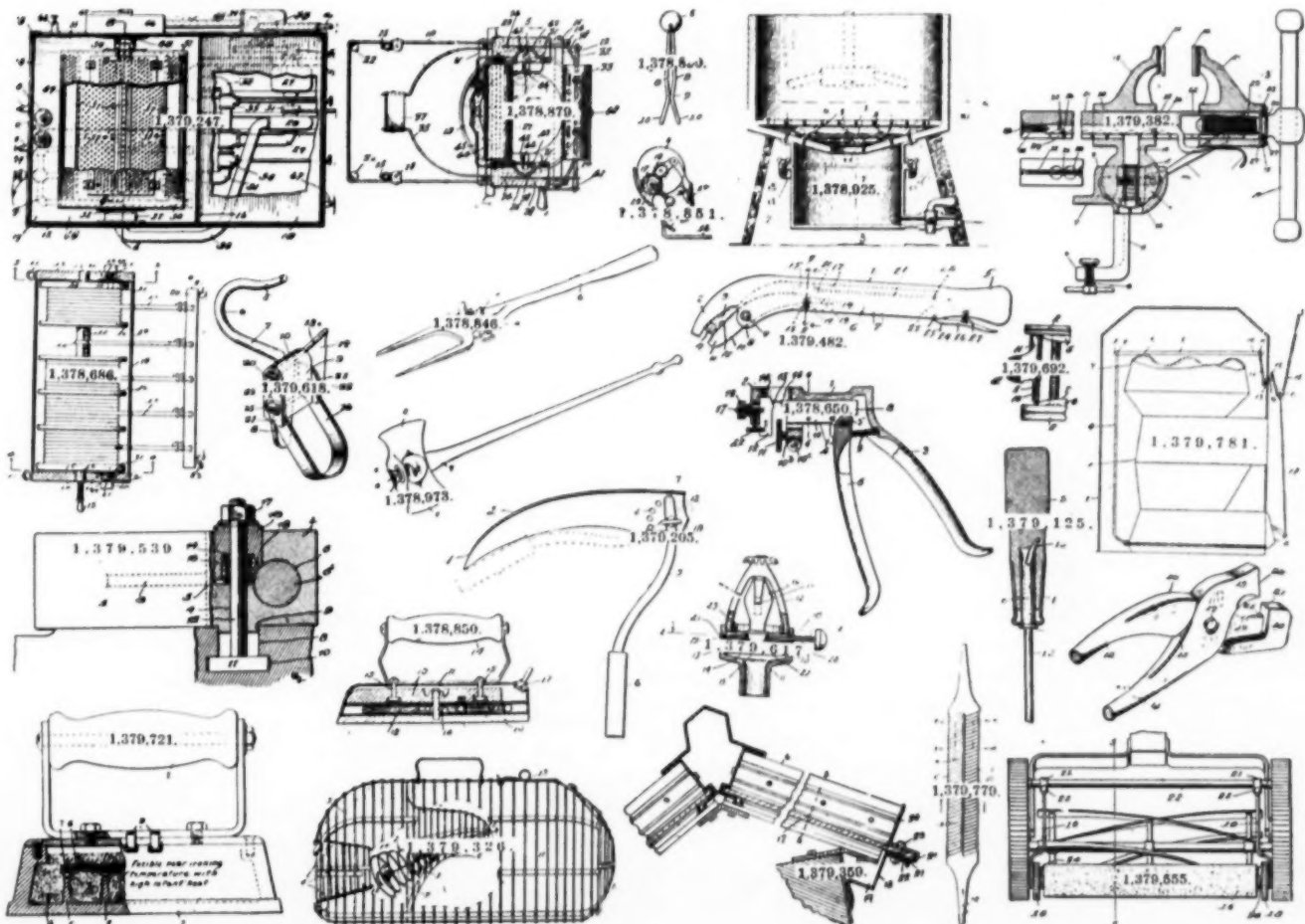
1,379,618. Clothes Wringing Attachment for Wash-tubs. Claude B. Davis, Richmond, Va. Filed September 22, 1920.

1,379,692. Thumb Brake for Fishing Reels. Charles T. Pflueger, Akron, Ohio, assignor to The Enterprise Manufacturing Company, Akron, Ohio, a Corporation of Ohio. Filed November 6, 1919.

1,379,721. Ironing Implement. Harry A. Rapelye, Edgewood Park, Pa. Filed October 1, 1919.

1,379,779. File. Eric M. Pritz, Jackson, Ohio. Filed October 4, 1919.

1,379,781. Automatic Damper Regulator. William V. Robinson, Owosso, Mich., assignor to Independent Stove Company, Owosso, Mich., a Corporation of Michigan. Filed November 10, 1919.



Weekly Report of the Markets

General Conditions in the Steel Industry. Review of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

STEEL PRICES ARE REDUCED APPROXIMATELY TEN PER CENT.

On July 6th the leading steel interest announced another reduction in its prices—the second one since April 12th—"to correspond with existing prices of competitors."

This announcement was preceded by one from the Bethlehem Steel Company on July 5th, so that generally speaking it may be said that the independents have finally succeeded in getting the Corporation to follow their lead in establishing a lower level of prices.

Along with the announcement of price reductions comes also a cut in wages ranging from twelve to fifteen per cent below the figures which had been paid up to June 30th, and also a change in working conditions by the abrogation of the overtime pay, the ruling being made that hereafter only the regular hourly rate will be paid in steel mills operated by the leading interests for all work over eight hours.

In this connection, it is also worthy of note that the mills represented in the Western Sheet and Tin Plate Manufacturers' Association have suspended operation practically entirely, owing to the fact that the employers and the employees could not come to an agreement in regard to "working conditions." The chief point of disagreement was about the employment of an extra man in each "crew." The manufacturers demand the elimination of this extra help which they claim is not necessary at all, and the Amalgamated Association of Iron Steel and Tin Workers, which is the Union organization of the employees, insist just as firmly on the retention of these men.

With the latest reduction in mill prices as announced by the leading interests, the new basis represents a total drop of from 25 to 33 1/3 per cent from average prices in the third quarter of 1918.

It is too early at this time to answer the question as to whether this price reduction will satisfy the buyers and induce them to reenter the market. But the general feeling is that it can not be expected that any great stimulation of new business can be brought about just by cutting prices, no matter how severely.

The railroads ought to be coming into the market for immense quantities of finished iron and steel before very long and there are signs that business will pick up in that line within a reasonably near future.

Bolts, Nuts and Rivets.

Advices from Cleveland indicate that there is a slight improvement in the demand for bolts and nuts. Inquiries are quite frequent but with the exception of those which come from the railroads are only for small quantities. The prices are holding at the levels established sometime ago, but it is generally understood that these may be shaded on sizable tonnage orders.

There is practically no demand for rivets owing to the general tie-up of the building industry. Plant op-

erations are spasmodic and in most cases merely to keep organizations together.

Steel.

As noted in the foregoing, prices on steel products have been reduced, the new quotations being \$1.90 for bars, \$2.00 for structural shapes, \$2.00 for plates, all Pittsburgh basis.

Only small sales are registered and many of the mills report orders ahead for only a week or two.

Copper.

The copper market appears to have stiffened up somewhat since the holidays, and in New York the larger producers are unwilling to quote less than 13 cents a pound on July deliveries although some of the smaller agencies still have some copper available at 12.75 cents.

Custom refineries are asking 13 cents for Electrolytic f. o. b. mills, but it is generally considered that they would accept 12.50 cents for this grade while 11.75 cents appears to be a fair settling price for standard copper from the same source.

Production of copper by United States smelters to June is estimated at about forty million pounds, with imports of not over fifteen millions pounds. The indication is that surplus stocks in producer's hands have been reduced between twenty-five million and thirty million pounds during the month.

There is no change in the Chicago quotation on, sheet copper, the price being 21 cents per pound, mill base.

Tin.

The Metal Exchange reports a decrease in the whole visible supply of tin of about four hundred tons, the amount on hand being approximately 18,850 tons on June 30th.

The proposed tariff of 2 cents per pound on pig tin appears to have had no effect so far on the consuming demand, and generally speaking, it is not believed that the higher duty on tin is likely to cause any advance in the domestic price. Operations in the primary market are mostly in futures, to arrive in the late Fall months, when it is expected that decreased stocks and improved trade conditions may cause a higher market on this metal.

New York prices are as follows: 29.87 1/2 cents for Straits, 29.75 cents for American pure, with futures 1/8 cent lower.

There has been no change in Chicago warehouse quotations, the warehouse prices being 32 cents for pig tin and 34 cents for bar tin.

Lead.

Lead is in better demand, and no supply is apparently available at less than \$4.30 to \$4.35, East St. Louis.

The tone of the market is strong and buyers contin-

ue to draw steadily on their contracts with fair regularity. There is some improvement also in white lead lines, and storage battery and cable concerns are also showing more interest. East St. Louis quotations are as noted in the foregoing, with New York prices 10 points higher.

The Chicago warehouse prices show an advance of 10 cents per 100 pounds, the new quotation being \$4.80 for American pig and \$5.55 for bar.

Solder.

No changes have been announced during the week on solder, Chicago warehouse prices being as follows: Warranted 50-50, per hundred pounds, \$21.00; Commercial 45-55, per hundred pounds, \$19.50; and Plumbers, per hundred pounds, \$18.50.

Zinc.

The domestic zinc market stiffened up somewhat over the holiday and shows an advance of about 10 points for spot and July deliveries, with 4.35 cents as an asking figure.

The outlook does not indicate any decided resumption of demand for sometime, but producers are apparently resigned to this condition. There is a reduction in the whole production, and sooner or later we are likely to face a serious condition as a result of the extremely low price of \$20.00 for ore which has been maintained for a considerable period in order to avoid abandonment of leases.

An important feature is the fact that more than 3,000 tons of zinc was imported during the month of April, and this is being used as an argument by the producers that the industry needs protection. As a result of this, it is announced that zinc bearing ores with more than 10 per cent zinc contents will bear an important duty of from $\frac{1}{4}$ cent to 1 cent per pound of zinc content. Under the present tariff act, zinc ore is imported free of duty.

Chicago warehouse quotations show an advance of 10 points for slab zinc, the new price being 4.80 cents.

Fence Wire and Nails.

It is authoritatively stated that new prices will be issued in field fencing within a few days and the report is that the reduction will be about \$7.00 per ton. The new prices have been determined upon by the manufacturer and will be passed along by the jobber as soon as he can figure them. Ornamental fencing is unchanged.

There is, of course, some demand for nails at all times and the indications are for heavier business throughout the balance of the season. Building is brisker and that means heavier nail sales.

A decline in the extra charge for galvanizing wire goods is effective immediately. The drop is 20 cents per 100 pounds in galvanized wire goods and 25 cents per 100 pounds in galvanized nails. Sale of wire goods is of a steady character.

Chicago warehouse prices follow: Number 8 black annealed wire, \$3.50 per 100 pounds; galvanized barbed wire, \$4.40 per 100 pounds; black painted wire cloth, 12 mesh, \$2.50 per 100 square feet; poultry netting galvanized before weaving, 40-10 per cent off; gal-

vanized after weaving, 40 per cent off; catch weight spool galvanized cattle wire, \$4.40 per 100 pounds; 80 rod spool galvanized hog wire, \$3.80 per spool; Number 8 galvanized plain wire, \$4.00 per 100 pounds.

Sheets.

The new prices of sheets represent a reduction of \$4.00 on blue annealed and \$5.00 on black and galvanized from the general levels of last week. On this basis, Pittsburgh quotations in carload lots are 2.65 cents for blue annealed sheets, 3.50 cents for black sheets, and 4.50 cents for galvanized sheets.

Chicago warehouse prices are as follows, all per hundred pounds: 10 gauge blue annealed sheets \$3.60, 28 gauge one pass cold rolled black sheets \$4.90, 28 gauge galvanized sheets \$5.90. Generally speaking, this shows a reduction of fifty cents per hundred pounds for blue annealed and black sheets and 25 cents per hundred pounds for galvanized sheets.

Tin Plate.

A large number of tin plate mills are idle while others are operating at only 25 per cent capacity, with very few exceeding that average. The list of idle mills was increased on July 1st when many of them became inactive pending the outcome of the wage conference which is being held at Columbus, Ohio. The price reduction which was announced by the leading interests as well as by a number of Independents on other steel products also affects the market on tin plate, and a reduction has been made of 50 cents per hundred pounds base stocks, the new Pittsburgh quotation being \$5.75.

Chicago warehouse prices remain the same.

Old Metals.

Wholesale quotations in the Chicago district which should be considered as nominal are as follows: Old steel axles, \$12.50 to \$13.00; old iron axles, \$17.00 to \$18.00; steel springs, \$11.50 to \$12.00; No. 1 wrought iron, \$9.25 to \$9.75; No. 1 cast, \$12.50 to \$13.00; all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 6 cents; light brass, 3.50 cents; lead, 2.50 cents; zinc, 1.50 cents; cast aluminum, 9 cents.

Pig Iron.

Pig iron prices are slightly softer, a continuation of declines being indicated by a quotation of \$19.00 both in Chicago and in the Valley district. Reports are heard in the Chicago market that Southern foundry iron has been sold below \$20.00 Birmingham base, but no sales at this figure have been made in Chicago.

Northern number 2 foundry iron and malleable iron are quoted at \$19 to \$20 Chicago and it is quite uncertain how much lower quotations would be made if a large and attractive order was in sight.

The general apathy continues in connection with all grades of steel making iron, no inquiries exceeding 200 tons.

The southern pig iron market is extremely slow, and with production lower than ever before it still exceeds the aggregate current business. Estimates of pig iron in furnace yards in Birmingham district place the amount at 145,000 tons of foundry and 100,000 tons of other grades.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS	HARDWARE	Scratch.	BEVELS, TEE.
PIG IRON.	ADZES.	No. 18, socket Handledper doz. \$ 2 50	Stanley's Rosewood handle, new listNet
Northern Fdy. No. 2...\$20 70-21 70	Carpenters'.	No. 344 Goodell- Pratt, list less.....35-40%	Stanley iron handle.....Net
Southern Fdy. No. 2.....26 67	Plumbs.....Per doz. \$29 00	No. 7 Stanley...per doz. \$ 2 25	BINDING CLOTH.
Lake Sup. Charcoal.....37 50	Coopers'.	AXES.	Zincd55%
Malleable\$20 70-21 70	Barton'sNet	First Quality, Single	Brass40%
	White'sNet	Bitted, 3 to 4 lb., per doz. 16 50	Brass, plated.....40%
FIRST QUALITY BRIGHT TIN PLATES.	Railroad.	First Quality Double	BITS.
	Plumbs.....Per doz. \$30 00	Bittedper doz. 22 50	Auger.
	AMMUNITION.	Broad.	Jennings Pattern.....Net
Per Box	Shells, Loaded, Peters.	Plumbs. Can. Pat., 6-lb. 65 00	Ford Car.....List plus 5%
IC 14x20 112 sheets \$12 50	Loaded with Black Powder, 18%	Single Bitted (without handles).	Ford's Ship....." 5%
IX 14x20.....13 60	Loaded with Smokeless	Plumbs, 4 1/4-lb.....19 50	Irwin35%
IXX 14x20.....15 20	Powder18%	Double Bitted (without handles).	Russell Jennings.....plus 20%
IXXX 14x20.....16 60	Winchester.	Plumbs, 4 1/4-lb.....23 50	Clark's Expansive.....33 1/4%
IXXXX 14x20.....18 10	Smokeless Repeater Grade,	BAGS, PAPER, NAIL.	Steer's " Small list, \$23 00..5%
IC 20x28.....25 0010 & 4%	Pounds .. 10 16 20 25	" " Large " \$26 00..5%
IX 20x28.....27 20	Smokeless Leader Grade,	Per 1000..\$5 00 6 50 7 50 9 00	Irwin Car.....35%
IXX 20x28.....30 4010 & 4%	BALANCES, SPRING.	Ford's Ship Auger pattern
IXXX 20x28.....33 20	Black Powder.....10 & 4%	Slight Spring.....Net	CarList plus 5%
IXXXX 20x28.....36 20	U. M. C.	StraightNet	Center10%
COKE PLATES	Nitro Club.....18%	BARS, WRECKING.	Countersink.
Cokes, 180 lbs.... 20x28 \$14 20	Arrow18%	V. & B. No. 12.....\$0 45	No. 18 Wheeler's...per doz. \$2 25
Cokes, 200 lbs.... 20x28 14 50	New Club18%	V. & B. No. 24.....0 75	No. 20 " " " 3 00
Cokes, 214 lbs....IC 20x28 14 85	Gun Wads—per 1000.	V. & B. No. 324.....0 80	American Snailhead " 1 75
Cokes, 270 lbs....IX 20x28 16 65	Winchester 7-8 gauge 10&7 1/4%	V. & B. No. 30.....0 85	" Rose " 2 00
	" 9-10 gauge 10&7 1/4%	V. & B. No. 330.....0 90	" Flat " 1 40
BLUE ANNEALED SHEETS.	" 11-28 gauge 10&7 1/4%	BASKETS.	Mahew's Flat " 1 00
Base.....per 100 lbs. \$3 60	Powder.	Clothes.	" Snail " 1 90
ONE PASS COLD ROLLED BLACK.	DuPont's Sporting, kegs..\$11 25	Small Willow...per doz. \$15 00	Dowel.
No. 18-20.....per 100 lbs. \$4 70	" 1/4 kegs 3 10	Medium Willow. " 17 00	Russel Jennings.....plus 20%
No. 22-24.....per 100 lbs. 4 75	DuPont's Canisters, 1-lb.. 55	Large Willow... " 20 00	Gimlet.
No. 26.....per 100 lbs. 4 80	" kegs.. 22 00	Galvanized, 1 bu. 1 1/4 bu.	Standard Double Cut Gross \$1 40
No. 27.....per 100 lbs. 4 85	" 1/4 kegs 5 75	Per doz.....\$16 08 \$18 72	Nail Metal Single
No. 28.....per 100 lbs. 4 90	" canisters 1 00	BEATERS.	CutGross \$4 00—\$5 00
No. 29.....per 100 lbs. 5 00	Hercules "E.C." kegs.....22 50	Carpet. Per doz.	Reamer.
	Hercules "Infallible," 25-can	No. 7 Tinned Spring Wire..\$1 10	Standard Square.....Doe. \$1 50
	drums 22 00	No. 8 Spring Wire Cop-	American Octagon... " 2 50
	Hercules "Infallible," 10-can	pered1 50	Screw Driver.
	drums 9 00	No. 9 Preston.....1 75	No. 1 Common.....30
	Hercules "E.C." and "Infal-	Egg.	No. 26 Stanley.....75
	lible," canisters.....1 00	No. 50 Imp. Dover.....\$1 10	BLADES, SAW.
	Hercules W. A. 30 Cal. Rifle,	No. 102 " " Tinned 1 35	Wood.
	canisters.....1 25	No. 150 " " hotel 2 10	Dleston 30-in.
	Hercules Sharpshooter Rifle,	No. 10 Heavy hotel tinned 2 10	Nos.6 66 26
	canisters.....1 25	No. 12 " " " 3 30	\$9 45 \$10 05 \$9 45
	Hercules Bullseye Revolver,	No. 15 " " " 3 60	BLOCKS.
	canisters.....1 00	No. 18 " " " 4 50	Wooden30%
	ANVILS.	Hand. 8 9 10 12	Patent30%
	Solid Wrought...23 & 23 1/2c per lb.	Per doz.\$11 50 13 00 14 75 18 00	BOARDS.
	ASBESTOS.	Moulders'.	Per doz.
	Paper up to 1/16.....10c per lb.	12-inchPer doz. 20 00	24x24\$13 65
	Millboard 3/32 to 1/4..10 1/2c per lb.	BELLS.	24x2614 05
	Corrugated Paper (250	Call.	24x2815 35
	sq. ft.).....\$6.50 per 100 lbs.	3-Inch Nickeled Rotary Bell,	30x3021 30
	Rollboard11c per lb.	Bronzed base...per doz. \$5 50	32x3225 50
	AUGERS.	Cow.	36x3630 50
	Boring Machine....40@40&10%	Kentucky30%	BOLTS.
	Carpenter's Nut.....50%	Door.	Carriage, Machine, etc.
	Hollow.	New Departure Automatic \$7 50	Carriage, cut thread, 1/4x6
	Bonney's.....per doz. \$30 00	Rotary.	and sizes smaller and
	Post Hole.	3 -in. Old Copper Bell... 6 00	shorter50 & 5%
	Iwan's Post Hole and Well...30%	3 -in. Old Copper Bell,	Carriage sizes larger and
	Vaughan's, 4 to 9 in.	fancy8 00	longer than 1/4x6.....50%
per doz. \$14 00	3 -in. Nickeled Steel Bell 6 00	Machine, 1/4x4 and sizes
	Ship.	3 1/2-in. Nickeled Steel Bell 6 50	smaller and shorter.....60%
	Ford'sNet	Hand.	Machine, sizes larger and
	AWLS.	Hand Bell polished List plus 15%	longer than 1/4x4...50 & 10%
	Brad.	White Metal....." 15%	Stove70%
	No. 3 Handled...per doz. \$0 65	Nickel Plated....." 5%	Tire50 & 10%
	No. 1050 Handled " 1 40	Swiss10%	Mortise, Door.
	Patent asst'd, 1 to 4 " 85	Miscellaneous.	Gem, iron.....5%
	Harness.	Church and School, steel	Gem, bronze plated.....5%
	Common1 05	alloys30%	
	Patent1 00	Farm, lbs.. 40 50 75 100	
	Peg.	Each\$3 00 3 75 5 50 7 25	
	Shouldered1 60		
	Patented75		
TIN.			
Pig tin.....32c			
Bar tin.....34c			

Barrel. CastNet Wrought Wrought, bronzed..... Flush. Wrought Spring. Wrought Wrought, heavy..... Square. Wrought	CEMENT, FURNACE. American Seal, 5 lb. cans, net \$ 45 " " 10 lb. cans, " 90 " " 25 lb. cans, " 1 87 Asbestos, 5 lb. cans..... 45 Pecora, 5 lb. cans..... 45 " 10 lb. cans..... 90 " 25 lb. cans..... 1 87 CHAINS. Breast Chains, With Slide.....doz. pairs, 5 50 Without Slide..... 5 05 Doubleslack..... 9 35 With Covert Snaps " 6 38 Picture Chains. Light Brass, 3 ft. per doz. 1 35 Heavy Brass, 3 ft. " 1 75 Sash Chain. (Morton's) Steel, per 100 ft. 0 \$2 50 2 3 10 1 3 60 Champion Metal. 0R 5 40 2R 5 60 1R 7 75 Champion Metal.—Extra Heavy. 1H \$9 50 Cable Sash Chains. Steel.....List Net Plus 15% CHALK, CARPENTERS'. Blueper gro. \$1 40 Red 1 40 White 1 25 Common White School Crayon 25c	Quilt Frame. No. 30 Ball and Socket, 2 1/4" head....per gross \$13 00 No. 50 Ball and Socket, 3 1/4" head....per gross 14 50 Hose. Sherman's, brass, 1/2", per doz.\$0 45 Double, brass 1/2", per doz. 1 20 Saw Filers. Wentworth's, No. 1, \$12 50; No. 2, \$18 25; No. 3, \$16 25. CLAWS, TACK. Wood hdl. No. 10...per doz. \$0 95 Forged steel, wood hdl. " 1 75 Solid steel 2 40 Giant 50 CLEANERS. Drain. Iwan's Adjustable.....25% Iwan's Stationary.....30% Pot. Wireper doz. \$0 75 CLEAVERS. Family. Beatty's, Inch..... 7 8 9 10 Per doz. \$27 00 29 00 33 00 36 00 CLEAVISES. Malleable10c lb. CLIPPERS. Bolt\$2 25 & 6 00 CLIPS. Axle65 @ 5% Damper. Standardper doz. 70c Troy 35c Hame 50c COLLARS, STOVE PIPE. Lacquered, Inches 5 6 7 Fancy pattern, per doz. 80c 85c \$1 15 COMPASSES. Carpenters'15% COPPERS—Soldering. Pointed Roofing. 3 lb. and heavier....per lb. 37c 2 lb. " " " 38c 2 1/2 lb. " " " 37c 1 1/2 lb. " " " 40c 1 lb. " " " 43c CORD. Picture. White Wire60 & 5% Sash. Sampson Spot, No. 7, per doz.\$10 25 COTTERS, SPRING. All sizes87 1/2% COUPLINGS, HOSE. Brassper doz. \$2 25 CRADLES, GRAIN. Morgan's Grapevine per doz. \$45 00 CUTTERS. Glass. Woodward40% Meat. Enterprise—Nos. 5 10 12 Each.... \$2 50 \$4 25 \$3 75 " Nos. 22 32 " " 6 50 8 50 Pipe. Saunders's, No. 1 2 3 Each\$1 85 2 75 4 75 Slaw and Kraut. Per doz. 4-knife Kraut.....\$20 00-55 00 3-knife Kraut, 8x27 in. 13 00-18 00 1-knife Slaw..... 2 50 2-knife Slaw..... 3 00 Washer 11 00 DAMPERS, STOVE PIPE . Diamond. All sizes50%	DIGGERS. Post Hole. Eureka.....per doz. \$14 50 Iwan's Split Handle (Eu- reka) 4-ft. Handle...per doz. 15 00 7-ft. " " " 20 00 Iwan's Hercules pattern per doz. 18 00 Dividers, Wing35% DRILLS. Blacksmiths' Twist (New List)40% Breast. Millers Falls No. 12, each \$46 00 " " "112, " 26 00 Hand. Goodell's Automatic. Nos. 01 02 Per doz. 12 00 14 40 Goodell's Single Gear, per doz. 15 75 Goodell-Pratt No. 4 1/2, per doz. list, less.....20% Goodell-Pratt No. 379, per doz. list, less.....20% Reciprocating. Goodell's..... per doz. 26 00 DRIVERS, SCREW. StandardNets Lock Ferrule Clark's Interchangeable..... Goodell's Spiral Yankee Ratchet " Spiral EAVES TROUGH. 70 & 10% off Standard List. ELBOWS—Stove Pipe. 1-piece Corrugated, Uniform. Dox. 5-inch\$1 50 6-inch 1 60 7-inch 2 10 Uniform, Collar Adjustable. Dox. 5-inch\$1 90 6-inch 2 00 7-inch 2 50 ELBOWS—Conductor Pipe. Galvanized Steel, Tin and Tarn, Round Corrugated. Size Dox. 2-inch60% 3-inch60% 4-inch60% 5-inch60% 6-inch60%
BOXES. Mail, No. 2 4 10 Per doz...\$18 00 \$23 00 29 00 Mitre. Stanley's.....Net Prices Stearns, No. 2...per doz. \$48 00 BRACES, RATCHET. Goodell-Pratt No. 408\$4 60 " " No. 410 4 80 " " No. 412 5 00 V. & B. No. 444 8 in..... 4 65 V. & B. No. 333 8 in..... 4 30 V. & B. No. 222 8 in..... 4 00 V. & B. No. 111 8 in..... 3 50 V. & B. No. 11 8 in..... 3 05 BURRS, RIVETING. Copper Burrs only..25% above list Tinner's Iron Burrs only.....30% BUTTS. Cast Iron7 1/2% Wrought Bronze, No. 175 AC 2 1/2\$1 75 Steel, Bright, Narrow 15-7 1/2-5% Steel, Japanned, NarrowList+65% CALIPERS. DoubleNet Inside and Outside..... Wing CAKES. Toe. Blunt and medium, 1 prong, per 100 lbs.....\$6 20 Sharp, 1 prong, per 100 lbs. 6 70 CANS. Milk. Ohio. Gals..... 5 8 10 Each\$3 65 \$4 45 \$4 70 Gem. Gals..... 5 8 10 Each\$3 85 \$4 95 \$5 20 Jersey or Holstein. Gals..... 5 8 10 Each\$4 15 \$5 60 \$5 90 CAN OPENERS. See Openers. CAPS, GUN. See Ammunition. CARRIERS. Hay. Diamond, Regular...each, Nets Diamond, Sling..... " " CARTRIDGES. See Ammunition. CASTERS. Standard—Ball Bearing, 50&10% Bed40% Common Plate. Brass Wheel15% Iron and porcelain wheels, new list.....50% Philadelphia Plate, new list50% Martin's40% CATCHERS, GRASS. No. 160S, per doz.....\$12 25 No. 165S, " 14 01	CHIMNEY TOPS. In bagsper bag \$1 70 CHECKS, DOOR CorbinNet List Russwin20% CHISELS. Cold. Good quality, 1/2 in., each \$0 44 " 1/4 in., " 0 28 Diamond Point. V. & B. No. 15, 1/4 in..... 0 23 V. & B. No. 15, 1/2 in..... 0 48 FIRMER BEVELLED. Berg's (Swedish). 1/2-inch, per doz.....\$ 4 45 1- " " " 7 15 1 1/2- " " " 10 15 2- " " " 17 15 2 1/2- " " " 26 95 Round Nose. V. & B. No. 65, 1/4 in..... 0 33 V. & B. No. 65, 1/2 in..... 0 44 SOCKET FIRMER. Berg's (Swedish). 1/2-inch, per doz.....\$11 95 1- " " " 16 75 1 1/2- " " " 23 95 2- " " " 35 95 Cape. V. & B. No. 50, 1/4 in..... 0 29 V. & B. No. 50, 1/2 in..... 0 64 CHUCKS, DRILL. Goodell's, for Goodell's Screw DriversList less 35-40% Yankee, for Yankee Screw Drivers\$6 00 CHURNS. Anti-Bent Wood, Gal. 5 7 10 Each\$3 00 4 60 4 85 Belle, Barrel65&7 1/2% Common Dash, Gal. 5 7 Per doz.\$17 00 19 00 CLAMPS. Adjustable. Martin's30% No. 63, Screw.....20% Cabinet. Screw20% Carpenters'. Steel Bar..List price plus 25% Carriage Makers'. 2 1/2"per doz. \$ 7 00 5" 14 00 8" 28 00 12" 46 00	CLIPS. Axle65 @ 5% Damper. Standardper doz. 70c Troy 35c Hame 50c COLLARS, STOVE PIPE. Lacquered, Inches 5 6 7 Fancy pattern, per doz. 80c 85c \$1 15 COMPASSES. Carpenters'15% COPPERS—Soldering. Pointed Roofing. 3 lb. and heavier....per lb. 37c 2 lb. " " " 38c 2 1/2 lb. " " " 37c 1 1/2 lb. " " " 40c 1 lb. " " " 43c CORD. Picture. White Wire60 & 5% Sash. Sampson Spot, No. 7, per doz.\$10 25 COTTERS, SPRING. All sizes87 1/2% COUPLINGS, HOSE. Brassper doz. \$2 25 CRADLES, GRAIN. Morgan's Grapevine per doz. \$45 00 CUTTERS. Glass. Woodward40% Meat. Enterprise—Nos. 5 10 12 Each.... \$2 50 \$4 25 \$3 75 " Nos. 22 32 " " 6 50 8 50 Pipe. Saunders's, No. 1 2 3 Each\$1 85 2 75 4 75 Slaw and Kraut. Per doz. 4-knife Kraut.....\$20 00-55 00 3-knife Kraut, 8x27 in. 13 00-18 00 1-knife Slaw..... 2 50 2-knife Slaw..... 3 00 Washer 11 00 DAMPERS, STOVE PIPE . Diamond. All sizes50%	DRIVERS, SCREW. StandardNets Lock Ferrule Clark's Interchangeable..... Goodell's Spiral Yankee Ratchet " Spiral EAVES TROUGH. 70 & 10% off Standard List. ELBOWS—Stove Pipe. 1-piece Corrugated, Uniform. Dox. 5-inch\$1 50 6-inch 1 60 7-inch 2 10 Uniform, Collar Adjustable. Dox. 5-inch\$1 90 6-inch 2 00 7-inch 2 50 ELBOWS—Conductor Pipe. Galvanized Steel, Tin and Tarn, Round Corrugated. Size Dox. 2-inch60% 3-inch60% 4-inch60% 5-inch60% 6-inch60% ENAMEL, STOVE. Iron, Black. Per Gross Peerless Gloss, 1/4 pt.....\$16 20 " " 1/2 pt..... 21 00 Per doz. " " 1/4 gal.....\$12 00 " " 1 gal..... 21 00 Aluminum Per Gross Peerless, 1/4 pt..... \$42 60 " 1/2 pt..... 61 20 EMERY. Domestic, lb.11 1/2c FASTENERS, STORM SASH. Shroeder'sper doz. \$1 50 Sensible 3 00 FILES AND RASPS. Simonds'50% Dinaston's50% Heller's (American)50&10% American50-10-8% Arcade50-10-4% Black Diamond40-10-2 1/2% Eagle50-10-1% Great Western50-10-8% Kearney & Foot.....50-10-8% McClellan50-10-8% Nicholson40-10-2 1/2% J. Barton Smith.....50-10-8% X FNet List FIRE POTS. Clayton & Lambert's— each\$4 00 @ \$6 00 Gate Cityeach 6 25 Gemeach, \$6 75 @ 8 50

Manure. 4-tine.....New prices	Coal Pick.....40% Drifting Pick.....40% File, assorted, 30c; Large, 35c per doz.	HOOKS. Awning, No. 60.....per gro. 50% Belt. Brown's70&5% Jones'65&5%	KNIVES. Beet Topping. Clyde, 9-in. Scimitar Blade, doz.\$2 85 California2 40
GAUGES. Cream Fall. Fairmount.....per doz. \$3 75	Hammer. Adze Eye...per doz. 40c to \$1 00 Blacksmiths' " 45c@1 00 Machinists' " 50c@1 00	Box. No..... 6 8 10 12 Each\$0 29 0 77 0 36	Butcher. Per doz. Beechwood Handles, 6" blade\$4 00 Beechwood Handles, 7" blade4 65 Beechwood Handles, 8" blade5 65
Marking, Mortise, etc.....Nets Wire. Disston's35%	Hay and Manure Fork.....25% Screw Driver. Assorted6 Large9	Bush. Common Axe Handle, per doz.\$22 00	Cooper's Hoop15% Corn. Clipperper doz. \$1 75 Disston's2 75 Earle's2 60 Woodford2 25
GIMLETS. Discount35@40%	Shovel and Spade.....25% HANGERS. Barn Door. U. S. Roller Bearing.....12 1/2% Matchless12 1/2% Warehouse Tandem, No. 4433 1/2%	Clothes Line. Japannedper doz. 48c@1 40 Galvanized.... " 75@2 50	Drawing. StandardList&5% Adjustable15% Barton's Carpenters'15%
GLUE. Bulk. B Amber.....per lb. 35c A White..... " 40c H. S. Amber..... " 32c	Conductor P. Iwan's Perfection.....45% Eaves Trough. All sizes, 5" or smaller,per gross \$3 80 Net All sizes, larger than 5"per gross 5 00 "	Coat and Hat. Common Wire per gro. 1 25-1 65 Conductor. Iwan's Tinned Sickle.....List	Hay. Iwan's Solid Socket..doz. 13 00 Heath's13 00 Iwan's, Sickle Edge.. " 13 00 Iwan's Imp'd Serrated " 18 00
Liquid. Army & Navy.....40% Le Page's— List "A".....37 1/2% List "B".....38 1/2% List "C".....25 %	Garage Door. Right Angle50&10% Sliding Folding50% Receding50%	Corn. Common, riveted, red, per dz. Net Little Giant..... "	Hedge. Challengeper doz. \$6 00 Disston's2 75
GREASE, AXLE. Wood Boxes. Fraser'sper gro. \$13 00 Hub Lightning.....7 50	Parlor Door. Acmeper set, \$3 75 Ives' Improved.... " 3 40 Lane's Standard... " 3 50 Lane's New Model " 3 10 Le Roy Noiseless.....40&10% Richards25% Advance40&10%	Grass. Common Nos. 1 3 5 7 Per Doz...\$4 50 3 50 3 75 3 25	Mining. Common, Single .. " 60 Common, Double.. " 90 Streeter, 4-blade.. " 1 30 Streeter, 6-blade.. " 2 00
Wood Falls. Fraser's, 15 lb. \$1.00; 25 lb. \$1.50 each. Hub Lightning, 15 lb. 90c; 25 lb. \$1.21 each.	Hasps. Hinge, Wrought..Add 50% to list With Staples—See Staples.	Hammock. With plate.....per doz. 1 10 With screw..... " 1 00	Putty. Common ...per doz. \$0 75@1 50 Landers ... " 1 75@2 50
Tin Cans. Fraser's. 1 1/2 lb. per doz.....\$1 75 2 lb. per doz.....2 25	HATCHETS. Plumbs, Claw No. 1.....\$1 65 Cast Claw, per doz. 1 50 @ 1 85 Cast Shingling " 1 50 @ 1 85 Germantown7 1/2% Plumbs, Octagon, Half.....\$2 00 Plumbs, Broad, No. 1.....1 90 Plumbs, Lathing No. 1.....1 50	Picture50%&50%&10% Potato and Manure.....Nets Screw. Brass70% (See Goods, Bright Wire.) Seat Spring.....per lb. 5 1/2c	Scraping. Beech Handle 90@1 10 Lander's5 50@6 50
GRINDSTONES. Family. Inches.. 7 8 10 12 Per doz. 20 50 21 75 26 25 30 50	HAY RACK BRACKETS. Wenzleman's No. 1per doz. sets \$18 00 Wenzleman's No. 2per doz. sets 19 20	HUSKERS. Boss. Nos. B E Per doz.....New Nets No. 59.....per doz. New Nets	Door. Mineralper doz. \$1 20 Porcelain " 1 90 Jet " 2 00
Mounted. Ball Bearing.. 1 2 3 Each\$4 75 5 00 5 25	HINGES. Blind. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3..... " " 5 75	Plane. Wood Bench..Add 10% to list Sad. Charcoalper doz. \$11 00 Common, polished, per 100 lbs. 7 75 No. 70 Asbestos.....\$1 50 net No. 100 " " 1 75 net Common, nickel plated.... 3 25	LADDERS. Common Long. ↑ Per ft.17c&23c
GUNS. Iver Johnson Champion Single Barrel Shot Guns.....Net Double Barrel, Hammerless.. "	Gate. Clark's 1 2 3 Hgs & Ltch, dz. \$5 50 7 00 9 75 Hinges only " 4 75 5 50 8 00 Latches only, 1 90 1 90 "	Tailors' Sad.....per lb. " Tailors' Goose.....per lb. " Ideal. 6 lb. Household\$3 50 9 lb. Dressmakers'4 25 14 lb. Tailors' Goose5 50	Extension. Per ft.22 to 23
HAFTS, AWL. Brad. Commonper doz. \$0 35	Screen Door. 1751—3x3doz. \$2 30 1753—2 1/2x2 1/2 " " 2 15	Tuyere. Single Duck Nest per doz. \$5 25 Double Duck Nest.. " 6 25 Suttoneach 2 60	Step. Common, per ft.....23c Common, with Shelf, add 10c. IXL Challenge, 6 to 9 ft.....34c 10 to 16 ft.....40c
Peg. Patent, plain top.. " 30 Patent, leather top " 90	Wrought Iron. Per 100 pairs with screws: Light Strag Hinges, No. 3 \$13 20 Heavy Strap Hinges, No. 4 16 50 Light T Hinges...No. 3 12 60 Heavy T Hinges...No. 4 20 60 Extra Heavy T Hinges, No. 4 22 50	Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LANTERNS. Bull's Eye Police. 3-in. Flash Light per doz. \$18 00
Sewing. Common " 24 Patent " 55	Screw Hook and Strap. 6 to 12 in....per 100 lbs. \$7 75 14 to 20 in.... " 7 50 22 to 36 in.... " 7 25	JACKS. Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LEADERS, CATTLE. Nos..... 51 52 Per doz.....\$1 35 1 45
HAMMERS, HANDLED. Each, net Blacksmiths, Hand, No. 0, 26 oz.....\$1 35 Engineers', No. 1, 26 oz.... 1 35 Farriers', No. 7, 7 oz..... 1 41 Machinists', No. 1, 7 oz.... 1 06	Spring. ChicagoAdd 12 1/2% to list Gem25% Ideal Detachable, per gro. \$11 00 Matchless40% New Idea.....per gro. \$7 20 Oxford20%	KETTLES. Brass15% Cauldron40&5% Copperper lb. 37 Maslin40&10% Sugar50%	LEATHER, LACE. Rawhide 1/2"100 ft. \$2 60 1/4" " 4 40
Nail Vs sodium, No. 4 1/2, 16 oz., each\$1 50 V. & B., No. 11 1/2, 16 oz., each1 13 Garden City, No. 11 1/2, 16 oz., each94	Wenzleman's No. 1per doz. sets \$18 00 Wenzleman's No. 2per doz. sets 19 20 Blind. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3..... " " 5 75	Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LEATHERS, PUMP. Valve and Plunger.....10%
Tinner's Riveting, No. 1, 8 oz., each80 Shoe, Steel, No. 1, 13 oz., each73	Gate. Clark's 1 2 3 Hgs & Ltch, dz. \$5 50 7 00 9 75 Hinges only " 4 75 5 50 8 00 Latches only, 1 90 1 90 "	JACKS. Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LEVELS. Disston, No. 23 Asst.....\$22 05 " No. 18, 20 in.....21 90 " No. 22, 24 in.....22 90 " Shafting, 6 in.....19 80 " " 6 in. gr. glass 24 20 " No. 1 Asst.....5 75 " No. 10, 12 in.....5 75 " No. 14, 16 in.....6 25 " No. 9 Asst.....12 40 " 24-26 in.12 40 " 28-30 in.13 10
Tack. Magnetic. No. 5, each.....1 00	Wenzleman's No. 1per doz. sets \$18 00 Wenzleman's No. 2per doz. sets 19 20 Blind. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3..... " " 5 75	JACKS. Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LIFTERS. Stove Cover. Coppered...per gro. \$3 25@5 50 Alaska.... " 5 0 Alaska.... " 10
HAMMERS, HEAVY. Farriers'20%	Wenzleman's No. 1per doz. sets \$18 00 Wenzleman's No. 2per doz. sets 19 20 Blind. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3..... " " 5 75	JACKS. Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LINES. 60-ft. Jute.....per doz. \$0 95 60-ft. Sisal..... " 40 50-ft. Cotton..... " 15 50-ft. Braided Cotton " 35
Masons'. Single and Double Face....50%	Wenzleman's No. 1per doz. sets \$18 00 Wenzleman's No. 2per doz. sets 19 20 Blind. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3..... " " 5 75	JACKS. Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LIFTERS. Stove Cover. Coppered...per gro. \$3 25@5 50 Alaska.... " 5 0 Alaska.... " 10
HANDLES. Auger. Common Assorted, per doz. \$0 79 Pratt's Adjustable, Nos. 1 & 2, per doz.....6 00 Ives' Adjustable...per set 1 35	Wenzleman's No. 1per doz. sets \$18 00 Wenzleman's No. 2per doz. sets 19 20 Blind. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3..... " " 5 75	JACKS. Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LIFTERS. Stove Cover. Coppered...per gro. \$3 25@5 50 Alaska.... " 5 0 Alaska.... " 10
Axe20% Chisel. Hickory, Tanged, Firmer, Assorted, 55c; Large, 85c per doz. Hickory, Socket Firmer, Assorted, 70c; Large size, 80c per doz.	Wenzleman's No. 1per doz. sets \$18 00 Wenzleman's No. 2per doz. sets 19 20 Blind. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3..... " " 5 75	JACKS. Locomotive30% Wagon. Richard's No. 1..per doz. \$15 50 Miller20 00 Oliver, Nos. 0 00 Each\$0 60 \$0 80 Standard, Nos. 1 2 Each\$0 60 \$1 00 R-W Big Lift40% Tiger40%	LIFTERS. Stove Cover. Coppered...per gro. \$3 25@5 50 Alaska.... " 5 0 Alaska.... " 10

<p>LINING, STOVE. Bricksper crate 42c</p> <p>LOCKS Barn Door. No. 60 Stearns...per doz. \$12 00 No. 80 " " " 24 00</p> <p>MACHINES. Riveting. Stearns No. 1...per doz. \$16 00</p> <p>Tenoning. No. 50 Peace's Spoke, each \$16 00</p> <p>MAIL BOXES. See Boxes.</p> <p>MALLETS. Carpenters'. Fibre Head, No. 1 per doz. \$16 50 " No. 3 " 19 50 " No. 4 " 25 50</p> <p>Round Hickory per doz. \$3 00—5 00 Round Lig- numvitae " 6 25—10 50 Square Hickory " 3 50—5 50 Square Lig- numvitae " 8 00—12 00</p> <p>Tinners'. Hickoryper doz. \$2 25</p> <p>MATS. Door. National Rigid5&10&5% Acme Steel Flexible.....50%</p> <p>Stove. No. 3.....per gro. Nets No. 1....." " No. 1 Asbestos Toasters or wire-covered Stove Mats, with handle...per doz. 1 10 No. 2 Asbestos Toasters, with ringper doz. 60</p> <p>MATTOCKS. Plumbs 25%</p> <p>MAULS. Wood Choppers'. Lake Superior & Oregon pat.40&5%</p> <p>MEASURES. Galvanized, dozNets Japanned, dozNets</p> <p>MILLS, COFFEE. Arcade40-10%</p> <p>MITRE BOXES. See Boxes.</p> <p>MOPS. Cotton, Star (Cut Ends). Pounds 12' 15' 18' 24'-3-oz. Per doz. \$4 50 5 65 6 75 9 00 Enterprise10&5% Parker50&5%</p> <p>NAILS. Cut Steel\$4 45 Cut Iron4 45</p> <p>Wire. Common4 00</p> <p>Cement Coated. Small Lots.....4 20</p> <p>Horseshoes. Ausable55&5% Capewell15% Perfect55&5% Putnam30&5% Star30&5%</p> <p>Picture. Brass Heads25%</p> <p>Grade50&5%</p> <p>FurnitureList plus 15%</p> <p>NAIL PULLERS. See Pullers.</p>	<p>NAIL SETS. See Sets.</p> <p>NETTING, POULTRY. Galvanized before weaving...50% Galvanized after weaving...40%</p> <p>NIPPERS. End Cutting. Berg's (Swedish) In 5 " 8 Per dozen.....\$12 60 15 20</p> <p>End and Diagonal Cutting. Berg's (Swedish) In 5 " 8 Per dozen\$10 05 13 00</p> <p>Hoof. Heller's40&10% V. & B., No. 52, each...\$2 25</p> <p>NOZZLES. Hose. Magicper doz. \$9 50 Diamond5 75</p> <p>NUTS, HOT PRESSED. Square Tapped. \$2.41 off per 100 lbs. Hexagon Tapped. \$2.41 off per 100 lbs.</p> <p>OILERS. Chase Pattern. Brass and Copper.....10% Zinc20%</p> <p>Railroad. Coppered33&5%</p> <p>Steel. Copper Plated50-10-5%</p> <p>OPENERS. Can. Delmonicoper doz. \$1 30 Never Slip....." 65</p> <p>Crate. V. & B.....per doz. \$7 25-11 00</p> <p>OUTFITS, COBBLING. Combinationper doz. \$16 00 Economy8 50 Family14 50</p> <p>PAIS. Cream. 14-qt. without gauge.per doz. \$9 50 18-qt. without gauge.per doz. 11 00 20-qt. without gauge.per doz. 11 75</p> <p>Sap. 10-qt., IC Tin...per doz. \$4 00 12 " " " " " 5 50</p> <p>Stock. Galv. qts. 14 16 18 20 Per doz. \$9 75 10 75 12 75 14 50</p> <p>Water. Galvanized qts. 10 12 14 Per doz.\$5 75 6 50 7 25</p> <p>Wood. Cable, 2-Hoop...per doz. Nets Cable, 3-Hoop...." Nets Cedar, 3-Hoop, brass " Nets</p> <p>FANS. DrippingNet Fry. CommonNets Acme"</p> <p>Roasting. Paxton, Nos.1 2 3 4 Per doz.Nets Neverburn Savory, No. 200...per doz. \$5 40</p> <p>PAPER. Roofing. per square Major, 1-ply\$1 22 " 2-ply2 24 " 3-ply3 05 Red Rosin.....per ton \$111 45</p> <p>Sand and Emery. No. 1, per ream, best grade \$5 40 No. 1, per ream, cheaper grade4 25</p>	<p>PARKERS. Apple. Goodell'sper doz. \$10 80 Turntable11 40 White Mountain " 8 40 Reading No. 78 " 11 40</p> <p>Potato. Goodell's Saratoga, 10 1/2 in., doz.5 50 Goodell's Saratoga, 5 in., doz.5 50</p> <p>PICKS. Adze Eye Ore.....22 1/2% Drifting and Poll Picks...22 1/2% Plumbs, Railroad22 1/2% Surface22 1/2%</p> <p>PINCERS. Carpenters', cast steel, No. " 6 8 10 12 Each \$0 56 \$0 72 \$0 92 \$1 02 Blacksmiths', No. 10.....\$ 96 Heller'sList plus 10%</p> <p>PINS. Clothes Common, per box of 5 gro. \$0 95</p> <p>Picket. Fluter, 15-in....per doz. \$1 10 Fluted, 21-in...." 1 60 Spiral1 90</p> <p>PIPE. Conductor. Plain Round and Round Corru- gated. 29 Gauge55¢ 28 "45% 26 "35% 24 "10% Square Corrugated A and B and Octagon. 29 Gauge40% 28 "40% 26 "30% 24 "10% Galvanized Toncan Metal, Genu- ine O. H. Iron, Lyonore Metal, Charcoal Iron and Keystone C. B. Plain Round and Round Corru- gated. 29 Gauge40% 28 "35% 26 "10% 24 "10% Square Corrugated A and B Polygon and Octagon. 29 Gauge40% 28 "30% 26 "10% 24 "10% 14 and 16-oz. Copper, all de- signs10%</p> <p>Fortico Elbows. Galvanized and Terne Steel. 1 -inch35% 1 1/2 -inch35% 1 1/2 -inch35% 2 -inch35% Discounts on Round apply on sizes 2-inch to 6-inch inclusive. Freight allowed on 15 dozen or more, to all points where freight rate does not exceed \$1.00 per 100 lbs. Less than 15 dozen F. O. B. Factory. Terms 30 days net, 3% ten days. Standard Gauge Conductor Pipe, Plain or corrugated. Not Nested40 & 10% Nested solid40 & 15%</p> <p>Stove. Per 100 Joints 28 Gauge, 5-inch.....\$15 00 " 6-inch.....16 00 " 7-inch.....17 00 30 Gauge, 3-inch.....10 00 " 4-inch.....11 50 " 5-inch.....13 00 " 6-inch.....14 00 " 7-inch.....17 00 T-Joint Made up. 6-inchper 100 \$40 00</p> <p>Furnace Pipe. Double Wall Pipe and Fit- tings40% Single Wall Pipe, Round Pipe Fittings40% Galvanized and Black Iron Pipe, Shoes, etc.40%</p> <p>PLANES. Stanley Iron Bench....Net</p> <p>PLIERS. V. & B. No. 6.....each \$0 57 " No. 7 Gas.....6 00 " Double Duty 10 1/2 " 0 56 " Nut No. 3.....0 64</p>	<p>Lineman's Side Cutting. Berg's (Swedish). In. 6 7 8 Blk. Pol. Face, doz.\$10 70 20 00 22 25</p> <p>Long Nose Side Cutting. Berg's (Swedish) In. 5 " 6 Blk. Pol. Face, doz. \$12 25 15 20</p> <p>Flat and Round Nose. Berg's (Swedish) Flat, In. 4 6 8 Blk. Pol. Face, Dox.\$8 90 13 35 19 65 Berg's (Swedish) Round, In. 4 6 8 Blk. Pol. Face Dox.\$11 15 16 30 23 35</p> <p>POINTERS, SPOKE. Stearns' No. 1....per doz. \$10 00 " No. 2...." 12 00</p> <p>POKERS, STOVE. Wrt Steel, str't or bent,per doz. \$0 75 Nickel Plated, coll han'l's " 1 10</p> <p>POLISH. Metal. Wizard, 6 -oz. . per gross \$21 00 " 1/2-pt. " " 24 00 " 1/2-gal. " " 13 00 " 1 -gal. " " 31 00</p> <p>Stove. Per gross Black Eagle Paste 5 -oz. \$19 25 " " 1/2-lb. 21 50 Black Eagle Liquid, 6-oz. per gross.16 20 Black Kid Paste, 5-oz. per case19 25 Black Kid Paste21 00 Black Jack Liquid, 1/2-pt. per gross16 20 Black Kid Liquid, 1/2-pt. 24 00 Black Jack Paste, No. 10 per gross16 25</p> <p>PRESSES, FRUIT AND JELLY Enterprise Manufacturing Co. 25%</p> <p>PRUNERS. Daston's Pole...per doz. \$18 00 Water's Improved...per doz. 20%</p> <p>PULLERS. Cork. Daisyeach \$3 10 Phoenix1 40 Quick and Easy...." 2 70</p> <p>Nail. Giantper doz. \$14 50 Never-Slip17 00</p> <p>PULLEYS. Awning-Jap'd10% Clothes Line10%</p> <p>Hay Fork. Iron Wheel, 5-in..per doz. \$2 50 Wood Wheel, 6-in. " 3 65 Wood Wheel, 6-in., pass knot3 00</p> <p>Sack. CommonNet Common-Sense, 2-in.....Net Empire Pattern, 2-in.....Net IdealNet SteelNet</p> <p>PUMPS. Spray. Midget Junior...per doz. \$2 75 New Misty6 00 Crescent6 50</p> <p>PUNCHES. Conductors. No. 22.....per doz. \$2 00</p> <p>Machineper lb. 25</p> <p>Saddlers'. Common...per doz. \$1 50 to \$5 00</p> <p>Revolving Spring. Stearns, No. 10...per doz. \$5 00 " No. 40.. " 10 00 " No. 60.. " 15 00</p>
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PUTTY. Strictly pure...per 100 lbs. \$8 00		SAWS. Band. Disston's 2-in. to 18-in. 10&5% " 1/4-in. to 1 1/4-in. 20&10%		SETS. Nail. Square head.....per doz. 1 84 Cup point, knurled " 1 78		SPRINKLERS, LAWN. Stearn's No. 1....per doz. \$11 50	
RAIL. Barn Door. Matchless, 1-in..... 5c Matchless, 1 1/4-in..... 7c Storm King 5c Sliding Door. Bronzed wrought iron, per ft. 8 1/4c		Butchers'. Disston's No. 2, 14-in.... 18 20 " No. 2, 18-in.... 19 50 " No. 2, 22-in.... 20 85 " No. 7, 16-in.... 20 00 " No. 7, 20-in.... 21 35 " No. 7, 24-in.... 23 35 " No. 7, 28-in.... 26 00		Rivet. Farmers'per doz. 2 50 Tinnert's 3-4 5 75 " 00-0 8 75		SQUARES. Steel and Iron.....Net (Add for bluing, \$3.00 per doz. net) MitreNet Try Try and Bevel..... Try and Miter..... Nets Fox'sper doz. \$6 00 Winterbottom's10%	
RAKES. Garden.per doz. Steel, Bow, 12-in. Teeth \$8 50 Steel, Bow, 14-inch " 9 25 Malleable Iron, 12-in. " 4 75 Malleable Iron, 14-in. " 5 00		Compass. Disston's No. 20 Jackson.. 4 30 " No. 40 Sampson. 2 60 " No. 277, 10-in.... 6 70 " No. 9, 10-in.... 7 70		Saw. Alken's Pattern...per doz. \$6 50 Disston's Monarch " 7 20 Disston's X-cut " 13 50 Leach's " 80 Nash's Hand 3 15 Nash's X-cut 4 20 Stillman's Lever... 1 30 Stillman's X-cut " 2 50 Whiting Pattern, No. 21 " 7 50 Eccentric Anvil, Hand No. 395, N. P. Morrill Pat- tern " 14 50		SQUEEZERS, LEMON. Common Wood.....per doz. \$0 70 Porcelain Lined, Wood " 1 25 Boss, malleable iron " 1 30 Iron frame porc'n bowl " 1 90 Iron frame, glass " 2 35 bowl Little Giant, tin'd " 4 00 Iron, japanned " 3 60 Drum, nickel plated. " 4 50	
May. Wood, 10 Teeth.....\$4 00		Cross-Cut. Disston's No. 289, 4-ft... 3 50 " No. 289, 6-ft... 6 85 " No. 289, 8-ft... 11 85		SHARPENERS, SKATE. Diamondper doz. \$1 60 Perfect 1 20		STAPLES. Blind. Barbedper lb. 21 @ 22c	
Lawn. 20 Teethper doz. 5 50		Flooring. Disston's D19, 16-in..... 27 15 " D19, 20-in..... 34 25		SHEARS. Per Doz. Nickel Plated, Straight, 6" \$12 90 " " " 7" 14 85 " " " 8" 16 30 Japanned, Straight " 6" 11 00 " " " 7" 12 40 " " " 8" 13 80		Butter, Tub " 16 @ 19c	
RAZORS—SAFETY. Gilletteper doz. \$45 00 Auto Strop 45 00 Gem 2 40 Gem (3 doz. lots) .. " 2 40 Ever Ready 2 40 Ever Ready (3 doz. lots) " 2 00		Hand and Rip. Disston's No. 7, 30-in.... 38 50 " No. 7, 32-in.... 42 90 " No. 8, 16-in.... 21 35 " No. 8, 20-in.... 25 15 " No. 8, 24-in.... 29 60 " No. 8, 28-in.... 35 45 " No. 8, 30-in.... 39 90 KeystoneNew Nets		SHEAVES, SLIDING DOOR. Common. Inches 3 4 5 Per set\$1 40 1 75 2 40		Fence— Polishedper 100 lbs. \$5 45 Galvanized " " 6 15	
RAZOR STROPS. Star (Honing)50%		Keyhole. Disston's No. 5..... 3 65 " No. 10..... 4 00 " No. 95..... 6 30		Hatfield's. Per set \$1 80 2 10 2 75 25		Netting. Galvanizedper 100 lbs. \$ 50	
REGISTERS. Cast Iron30% Steel and Semi-Steel.....30% Baseboard30% Adjustable Ceiling Ventilators 30%		Miter Box. Disston's No. 4, 4x20-in.. 36 15 " No. 4, 5x22-in.... 43 25 " No. 4, 6x22-in.... 47 20		SHELLERS, CORN. Unionper doz. \$6 75		Wrought. Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples50&10% Extra heavy35%	
REGISTER FACES. Japanned, Bronzed and Plated. 4x6 to 14x14.....30% 14x14 to 38x42.....50%		Patternmakers'. Disston's 7 1/4-in 12 05		SHIELDS. Expansion Bolt Shields.....60%		STEELYARD. Discount 25%.	
REVOLVERS. Iver Johnson Safety Automatic HammerNet Hammerless I. J. Model 199....."		Pruning. Disston's No. 20..... 20 80		SHINGLES. Per Square Zinc (Illinois).....\$15 00		STONES. Axe. Hindostanper lb. New Nets More Grit " " " Washita " " "	
RINGS AND RINGERS. Bell. Copper2 1/4-in. 2-in. Per doz.\$2 40 \$3 65 Pua's Improved Self- Pivoting copper, doz. \$ 40 Steel, per doz. 1 50 1 80		Stairbuilders'. Disston's 6-in. 7 90		SHOES. Conductor60%		Emery. No. 125.....per doz. New Nets	
Mog. Blair's Rings....per doz. \$ 75 Blair's Ringers.. " 1 00 Brown's Ringers.. " 72 Brown's Ringers.. " 1 00 Hill's Ringers.... " 72 Hill's Ring, boxes " 72 Major Rings 60 Perfect Ringers " 1 50 Wolverine Rings " 1 10 Wolverine Ringers " 1 10		Wood. Disston's No. 111, 30-in.. 22 20 " No. 111, 32-in.... 22 75 " No. 47, 30-in.... 20 25 " No. 47, 32-in.... 20 80		SHOT—See Ammunition.		Oil—Mounted. Arkansas Hard No. 7.....per doz. New Nets Arkansas Soft " " " Washita No 717. " " "	
FRUIT JAR. Whiteper lb. 30		SAW FRAMES. Common, plain.....per doz. \$1 50 Common, painted " 2 10		SHOVELS AND SPADES. Hubbard's No. A B C D 1 \$16 00 15 10 14 45 13 70 2 16 35 15 60 14 85 14 10 3 16 75 16 00 16 25 14 45 4 17 10 16 35 16 60 14 85		Oil—Unmounted. Arkansas Hard per lb. New Nets Arkansas Soft.. " " " Lilly White.... " " " Queer Creek... " " " Washita " " "	
Key. Split, round.....per doz. \$0 17 Split, square " 22 Split, round " 40		SCISSORS. Star60%		Post Drains & Ditching. Hubbard's Size A B C 14" 17 15 16 40 15 65 16" 17 50 16 75 16 00 18" 17 85 17 10 16 35 20" 18 20 17 45 16 70 22" 18 55 17 80 17 05		Scythe. Black Diamond per gro. New Nets Crescent Green Mountain " " LaMoille Extra Quinne- bog Red End "	
RIVETS. Copper Belt....Add 15% to list Coppered Iron30% Tinnert's20%		SCRAPERS. Box. Triangular, No. 6 per doz. \$6 25		SNOW. Hubbard Special, Long Handle\$10 00 D-Handle 11 00 Sidewalk Scraper 6 50		STOPPS, BENCH. No. 10 Morrill pat- ternper doz. \$11 00 No. 11 Stearns pat- tern 10 00 No. 15 Smith pattern " 7 00	
Slotted Clinch..per doz. 60 @ 1 10		Road. Cubic ft. 7 5 3 With runners, ea. \$7 00 6 50 6 20		Alaska Steel. D-Handleper doz. \$3 50 Long Handle 3 00		STOPPERS, FLUE. Commonper doz. \$1 10 Gem, flat, No. 3.... " 1 00 Gem, No. 1..... " 1 10	
Tubular. Nos. 1 and 2 assorted sizes. 50 in box.....doz. 75c Nos. 1 and 2 assorted sizes. 10 in box.....doz. 1 40		SCREEN DOOR HINGES. Cast irongross \$13 00 Steel " 9 50		SINKS. Painted, 16x24Net Enameled, White, 16x24.. "		STRAPS. Skateper doz. 85c&1 20	
ROPE. Cotton. 1/4, 5-16 in. Com. on reels, per lb.19 1/2c 1/4, 5-16 in. Com. in coils, per lb.18 1/2c		SCREWS. Bench. Iron, ins. 1 1 1/4 1 1/4 \$6 82 7 87 9 45 16 80 Wood, white maple, per doz. 6 00		SNAPS, HARNESS. Covered Spring.....Add 30% Judd's Pattern Add 33 1-6% to list		STRETCHERS. Carpet. Bullard'sper doz. \$3 90 Excelsior 5 25 Malleable Iron.... " 70 Perfection " " 6 30 King 4 50	
Steel. 1st Quality14 1/2c to 15 1/2c No. 113 1/2c to 14 1/2c		Hand—Wood50% Hand Rail22% Jack30% Lag or Coach—all sizes, gimlet pointed45-50%		SNATHS. Double Ring, Bush..per doz. \$9 75 Patent Loop, Bush.. " 10 00 Patent Loop, Grass " 8 75		Wire. O. S. Elwood, No. 2 " " O. S. Elwood, No. 1 per doz. Nets	
Pure Manila. 1st Quality, base, per lb. 19 1/2c to 20 1/2c Hardware Grade, per lb. 18 1/2c to 19 1/2c		Saw—Centennial. Nos. 1 2 3 4 Per doz....47c 55c 75c 90c		SNIPS, TINNERS'. Clover Leaf40&10% National40&10% Star50%		SWIVELS. Malleable Iron.....per lb. \$0 10 Wrought Steel.....per gro. 4 50	
		Wood. F. H. Bright72 1/4-30% F. H. Blued70-20% F. H. Jap'd65-20% F. H. Brass65-20% R. H. Brass62 1/2-20%		SPRINGS, DOOR. Perfect. Nos.... 2 3 4 5 6 7 Per doz. 55c 60c 65c 75c 90c 1 00		TACKS. Bill Posters' 6-oz., 25 lb. boxes. per lb.....15c Upholsterers' 6-oz., 25-lb. boxes, per lb.....15 1/4c	
		SCYTHES. Clipper, Grassper doz. \$18 50 Honest Dutchman.. " 18 00		Reliance. Light Medium Heavy Per doz. \$1 55 2 10 3 20 Torrey'sDm. doz. 1 65			

Ceilings—Metal. Burton Co., W. J., Detroit, Mich. Friedley-Voshardt Co., Chicago, Ill. Hopson Co., W. C., Grand Rapids, Mich. Milwaukee Corrugating Co., Milwaukee, Wis. Northern Corrugating Co., Green Bay, Wis. Wheeling Corrugating Co., Wheeling, W. Va.	Enamels—Wood. Cornish & Co., J. B., Chicago, Ill. Federal Varnish Co., Chicago, Ill. Fence Gates. American Steel & Wire Co., Chicago, Ill. Pittsburgh Steel Co., Pittsburgh, Pa.	Heaters—Warm Air—Cont. May-Fieberger Furnace Co., Newark, Ohio Meyer Furnace Co., Peoria, Ill. Monitor Stove Co., Cincinnati, Ohio Monroe Fdy. & Furnace Co., Monroe, Mich. Peerless Foundry Co., Indianapolis, Ind. Premier Warm Air Heater Co., Dowagiac, Mich.	Nails—Slatting. Hussey & Co., C. G., Pittsburgh, Pa. Nails—Wire. American Steel & Wire Co., Chicago, Ill. Pittsburgh Steel Co., Pittsburgh, Pa.
Chain—Sash. Parker Supply Co., New York, N. Y.	Fencing Wire. Pittsburgh Steel Co., Pittsburgh, Pa.	Rudy Furnace Co., Dowagiac, Mich. Rybolt Heater Co., Ashland, Ohio Scheible-Moncrief Heater Co., Cleveland, Ohio Schill Bros. Co., Crestline, Ohio	Nut Crackers. Enterprise Mfg. Co. of Pa., Philadelphia, Pa.
Chaplets. Fanner Mfg. Co., Cleveland, Ohio	Fenders. Meyers Mfg. Co., Fred J., Hamilton, Ohio	Schwab & Sons Co., R. J., Milwaukee, Wis. Standard Furnace & Supply Co., Omaha, Neb.	Ornaments—Sheet Metal. Friedley-Voshardt Co., Chicago, Ill. Gerock Bros. Mfg. Co., St. Louis, Mo.
Chisels. Vaughan & Bushnell Mfg. Co., Chicago, Ill.	Files. Heller Bros. Co., Newark, N. J.	St. Louis Heating Co., St. Louis, Mo. Waterloo Register Co., Waterloo, Iowa Wellston Mfg. Co., Wellston, Ohio Wise Furnace Co., Akron, Ohio	Patterns—Stove. Cleveland Castings Pattern Co., Cleveland, Ohio Quincy Pattern Co., Quincy, Ill. Shaw & Son Co., The Geo. E., Cleveland, Ohio
Clips—Damper. Carr Supply Co., Chicago, Ill. Waterloo Register Co., Waterloo, Iowa	Flux—Aluminum. Roesch, Geo. E., Aurora, Ill.	Holders—Flag Pole. Enterprise Mfg. Co. of Pa., Philadelphia, Pa.	Taft Metal Pattern & Mfg. Co., Cleveland, Ohio Vedder Pattern Works, Troy, N. Y.
Coal Chutes. Peerless Foundry Co., Indianapolis, Ind. Sykes Co., The, Chicago, Ill.	Freezers—Ice Cream. North Bros. Mfg. Co., Philadelphia, Pa.	Horse Shoes. American Steel & Wire Co., Chicago, Ill.	Pipe and Fittings—Furnace. Carr Supply Co., Chicago, Ill. Central Heating Supply Co., Chicago, Ill.
Coasters. The Auto-Wheel Coaster Co., Inc., No. Tonawanda, N. Y.	Furnace Rings. Independent Reg. & Mfg. Co., Cleveland, Ohio Walworth Run Fdy. Co., Cleveland, Ohio	Humidifiers. Haynes, Kansas City, Mo.	Henry Furnace & Fdy. Co., Cleveland, Ohio Lamneck Co., W. E., Columbus, Ohio
Cores—Radiator, Auto Curfman Mfg. Co., F. L., Maryville, Mo. G. & O. Mfg. Co., New Haven, Conn.	Garages—Metal. Wellman Supply Co., Springfield, Mass.	Incubators. Queen Incubator Co., Lincoln, Nebr.	Manny Heating Supply Co., Chicago, Ill. Meyer & Bro. Co., F., Peoria, Ill.
Cornices. Burton Co., W. J., Detroit, Mich. Friedley-Voshardt Co., Chicago, Ill. Milwaukee Corrugating Co., Milwaukee, Wis.	Guards—Fire. Meyers Mfg. Co., Fred J., Hamilton, Ohio	Indoor Closet. Independent Reg. & Mfg. Co., Cleveland, Ohio	Jobbers—Hardware. Bullard & Gormley Co., Chicago, Ill. Clark-Smith Hardware Co., Peoria, Ill.
Cut-Offs—Rain Water. Sullivan-Geiger Co., Indianapolis, Ind.	Hammers. Vaughan & Bushnell Mfg. Co., Chicago, Ill.	Kitchen Utensils. Lalance & Grosjean Mfg. Co., Chicago, Ill.	Pipe and Fittings—Stove. Hemp & Co., St. Louis, Mo. Meyer & Bro. Co., F., Peoria, Ill. Sullivan-Geiger Co., Indianapolis, Ind.
Display Stands—Vise. Prentiss Vise Co., New York, N. Y.	Handles—Boiler. Berger Bros. Co., Philadelphia, Pa.	Lath—Expanded Metal Milwaukee Corrugating Co., Milwaukee, Wis.	Pipe—Conductor Berger Bros. Co., Philadelphia, Pa.
Dry Paste. Carr Supply Co., Chicago, Ill.	Handles—File. Parker Supply Co., New York, N. Y.	Machines—Crimping. Bertsch & Co., Cambridge City, Ind. Niagara Machine & Tool Works, Buffalo, N. Y.	Burton Co., W. J., Detroit, Mich. Clark-Smith Hdw. Co., Peoria, Ill. Dieckmann Co., Ferdinand, Ohio
Dumb Waiters. Sedgwick Machine Works, New York, N. Y.	Hangers—Eaves Trough. Abbott Mfg. Co., Cleveland, Ohio W. C. Hopson Co., Grand Rapids, Mich.	Machinery—Culvert. Bertsch & Co., Cambridge City, Ind.	Friedley-Voshardt Co., Chicago, Ill. Hussey & Co., C. G., Pittsburgh, Pa.
Eaves Trough. Abbott Mfg. Co., Cleveland, Ohio Berger Bros. Co., Philadelphia, Pa. Burton Co., The W. J., Detroit, Mich.	Heaters—School Room. Haynes-Langenberg Mfg. Co., St. Louis, Mo. Meyer Furnace Co., Peoria, Ill. Monroe Fdy. & Furnace Co., Monroe, Mich.	Machines—Razor Blades. Hyfield Mfg. Co., New York, N. Y.	Lupton's Sons Co., David, Philadelphia, Pa. Milwaukee Corrugating Co., Milwaukee, Wis.
Clark-Smith Hardware Co., Peoria, Ill. Lupton's Sons Co., David, Philadelphia, Pa. Milwaukee Corrugating Co., Milwaukee, Wis.	Heaters—Warm Air. American Furnace Co., St. Louis, Mo. Black Diamond Furnace Co., Monmouth, Ill. Carr Supply Co., Chicago, Ill.	Machines—Stove Pipe. Hemp & Co., St. Louis, Mo.	Pipe—Conductor Berger Bros. Co., Philadelphia, Pa.
Central Heating Supply Co., Chicago, Ill. Cooperative Foundry Co., Rochester, New York Forest City Fdy. & Mfg. Co., Cleveland, Ohio	Machines—Tin Smiths'. Bertsch & Co., Cambridge City, Ind. Dreis & Krump Mfg. Co., Chicago, Ill.	Machinery—Culvert. Bertsch & Co., Cambridge City, Ind.	Polish—Metal and Stove. Black Silk Stove Polish Co., Sterling, Ill.
Haynes-Langenberg Mfg. Co., St. Louis, Mo. Hall-Neal Furnace Co., Indianapolis, Ind. Hammond Heating Co., Cincinnati, Ohio	Posts—Steel Fence. American Steel & Wire Co., Chicago, Ill.	Mailing Lists. Ross-Gould, St. Louis, Mo.	Presses—Lard. Enterprise Mfg. Co. of Pa., Philadelphia, Pa.
Henry Furnace & Fdy. Co., Cleveland, Ohio Hess-Snyder Co., Massillon, Ohio Independent Stove Co., Owosso, Mich.	Punches. Bertsch & Co., Cambridge City, Ind.	Meat and Food Choppers. Enterprise Mfg. Co. of Pa., Philadelphia, Pa.	Punches—Combination Bench and Hand Parker Supply Co., New York, N. Y.
Lennox Furnace Co., Marshalltown, Iowa Mahoning Fdy. Co., Youngstown, Ohio Manny Heating Supply Co., Chicago, Ill.	Metals—Perforated. Harrington & King Perforating Co., Chicago, Ill.	Miters. Friedley-Voshardt Co., Chicago, Ill.	Punches—Hand. Parker Supply Co., New York, N. Y.
Elbows and Shoes—Conductor. American Rolling Mill Co., Middletown, Ohio Dieckmann Co., Ferdinand, Cincinnati, Ohio Lupton's Sons Co., David, Philadelphia, Pa. Milwaukee Corrugating Co., Milwaukee, Wis.	Elevators—Hand and Power. Kimball Bros. Co., Council Bluffs, Iowa Sedgwick Machine Works, New York, N. Y.		